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Legal Analytics, Social Science, and Legal Fees: Reimagining "Legal Spend" Decisions in an Evolving Industry

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LEGAL ANALYTICS, SOCIAL SCIENCE, AND LEGAL FEES: REIMAGINING "LEGAL SPEND" DECISIONS IN AN EVOLVING INDUSTRY[+]

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For the past decade, the legal industry has been transforming itself. Much of the change has resulted from legal industry disruptors (technological innovations, data analytics tools, and alternative service providers) that have affected the legal service delivery model.[1] The most forward-thinking legal industry leaders are reimagining how the legal industry's historic "rate x hours = price" economic model delivers the optimal value.[2] What our profession calls "BigLaw"[3]—and BigLaw's clients—catalyzed a movement to

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  1. Mark A. Cohen, *Legal Change: Why Drip, Not Disruption?*, FORBES (Apr. 26, 2018, 6:35 AM), https://www.forbes.com/sites/markcohen1/2018/04/26/legal-change-why-drip-not-disruption/#5aac110c1fbf [https://perma.cc/AV7R-CPAN].

  2. *See, e.g.*, Bernard A. Burk & David McGowan, *Big but Brittle: Economic Perspectives on the Future of the Law Firm in the New Economy*, 2011 COLUM. BUS. L. REV. 1, 37 n.94 (citation omitted) ("A survey of chief legal officers that law firm consultants Altman Weil conducted in the summer of 2009 found that nearly 40% of client companies are putting some pressure on law firms to change the 'value proposition' in their delivery of legal services.").

  3. The term "BigLaw" has no exact definition, but its meaning appears to be generally understood, albeit with some fuzzy boundaries. Some characterize BigLaw as "[law firms] employing more than 500 lawyers . . . ." Ashby Jones, *The Third-Year Dilemma: Why Firms Lose Associates*, WALL ST. J. (updated Jan. 4, 2006, 11:59 PM), https://www.wsj.com/articles/SB113571843977932357 [https://perma.cc/NTR8-RLHC] (citing a NALP Foundation study). Others characterize BigLaw as "the group of historically profitable firms that cater to the country's largest corporations." *See* Noam

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leverage hundreds of billions in "legal spend"[4] data that in turn, when coupled with legal analytics[5] software tools, could offer valuable insights into both the pricing and evaluation of the quality of legal services.[6] Non-BigLaw firms are not to be forgotten as they, too, have the capacity to capitalize on legal analytics data to improve firm performance and client outcomes.

The first decision that any law firm, or its clients, would have to make is that legal analytics data points actually matter—that deciding how to staff an engagement and how to price it is better done with data than with a partner's gut hunches. Many law firms don't relish having to pin down budgets or set staffing allocations, in part because they're uncomfortable committing to restrictions that might prevent them from adapting to changing circumstances. There's a myth that every complex matter is *sui generis.* In one sense, obviously, that's right. Every matter has unique aspects. But most matters, even a high-profile, game-changing matter, will bear a substantial relationship to other engagements that preceded it, and every matter

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Scheiber, *The Last Days of BigLaw*, NEW REPUBLIC (July 21, 2013), https://newrepublic.com/article/113941/big-law-firms-trouble-when-money-dries [https://perma.cc/92SL-3RAD]. BigLaw is also characterized by reference to rankings listed in the *American Lawyer* and the *National Law Journal. Id.*; *see also The NLJ 500/National Law Journal*, NAT'L L.J., https://www.law.com/nationallawjournal/rankings/the-nlj-500/ [https://perma.cc/CFQ4-VPJ2] (last visited Feb. 20, 2019). Regardless of whether there's a universally accepted definition, BigLaw historically has been the trend-setting, incumbent law firms in the legal industry (and the group most susceptible to dethronement).

4. "Legal spend" is the business-speak shorthand for how much of a client's budget is being spent on outside counsel and other external legal services. *See* Steven O'Donnell, *What Is Legal Spend Management?*, MITRATECH, https://www.mitratech.com/blog/what-is-legal-spend-management/ [https://perma.cc/H4SJ-PNY4] (last visited Jan. 28, 2019).

5. See *infra* Section III.A for a definition of "legal analytics."

6. Our friend Bernie Burk has pointed out that the use of big data is still primarily a BigLaw (and BigLaw client base) process. "Analytics is also useful to the other 80% of the practicing bar, but they don't have the data in place to mine their own[] and will need third-party tools based on industry experience." Notes from Bernard A. Burk to Nancy Rapoport (Dec. 15, 2018) (on file with authors and the Georgia State University Law Review) [hereinafter Burk Notes]. Also, our friend Randy Gordon has pointed us to one BigLaw firm's use of data-driven analysis. *See* Amanda James, *Data-Driven Lawyer: Littler's Scott Forman*, LAW360 (Dec. 4, 2018, 3:35 PM), https://www.law360.com/articles/1105930/data-driven-lawyer-littler-s-scott-forman [https://perma.cc/L4FS-TKMP]; *see also* E-mail from Randy Gordon to Nancy Rapoport (Dec. 5, 2018) (on file with authors and the Georgia State University Law Review).

will have anatomically identical aspects.[7] The whole point of hiring law firms with significant expertise is that the senior lawyers can use their prior experience to inform their current decisions.[8]

The next decision involves pinpointing the most relevant cost drivers and related data. Hourly rates are only a secondary component of what can drive a bill's cost. Other components can include decisions about how various tasks are staffed,[9] decisions about which tasks to undertake in the first place, and decisions on which expenses to pass along to the client. When legal spend data are properly analyzed at a task level (in other words, activities like "research X," "draft Y," or "call person Z") and then benchmarked against industry norms, legal professionals can better predict the cost of legal services and whether the cost aligns with legal strategy and the expected outcome of the legal engagement.

Both clients and law firms want the same things: pricing predictability, economic visibility, operating efficiency, and value delivery.[10] Neither side is happy with the uncomfortable feeling of

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7. For instance, due diligence at some level of scrutiny occurs in every business combination transaction; nearly all lawsuits involve settlement discussions and discovery, and a patent application precedes the USPTO's issuance of a patent.

8. Bernie Burk explains this point well:

> The idea is, simply, that while every case IS different, experienced lawyers get paid a lot of money to use their lifetime of experience to weigh the variables[] and pick the optimum tactics among many possible options[] or predict the likelihood of an uncertain outcome. Everyone knows experienced lawyers are better at this than newbies. Why? Easy[—]because they have a lifetime of experience testing their judgment against reality. Now, suppose you could aggregate the life experience and judgment of MANY, MANY experienced lawyers[] and bring the raw processing power to bear that could figure out what kinds of similarities make similar cases more likely to perform similarly[] and what kinds of differences are more likely to produce different results. Voilà[—]welcome to legal analytics.

Burk Notes, *supra* note 6, at 2.

9. *See* Sameena Kluck, *Law Firms Must Look at Staffing as Part of Pricing and Profitability Models, Forum Panel Says*, THOMAS REUTERS: LEGAL EXECUTIVE INST. (June 22, 2016), http://www.legalexecutiveinstitute.com/staffing-as-part-of-pricing/ [https://perma.cc/4L7M-WMHC]. Tasks are staffed both in terms of how many professionals will work on a given task and in terms of the level of experience of each professional. *Id.*

10. *See* Mark A. Cohen, *Differentiation in the New Legal Marketplace and Why It Matters*, FORBES (Jan. 2, 2018, 6:05 AM), https://www.forbes.com/sites/markcohen1/2018/01/02/differentiation-in-the-new-legal-marketplace-and-why-it-matters/#7c0ccb2e38ef [https://perma.cc/T53E-5L2X].

not really knowing what is fair to pay and not really knowing what is fair to charge. Given the changes in the legal market, clients are more aggressive about pushing back on bills; thus, law firms that don't take control of their on-the-ground choices run the risk of having to reduce those bills in order to retain major clients.[11] Legal analytics are becoming indispensable in terms of making the legal industry function efficiently and transparently.

To give you a feel for the power of legal analytics, imagine that you are the managing partner of a law firm. With a good set of algorithms and the push of a few buttons, you can make sure that you've delegated each part of an assignment to the professional with the exact combination of experience, talent, and diligence to maximize your firm's client satisfaction and profitability.[12] The client will be pleased both with the work product and its efficiency—and will pay your full bill without any grumbling or request for a reduction of the fees. The client will even tell other potential clients how well-organized and professional your law firm is, and your law firm will then increase its market share. Imagine further that your client is considering hiring you for a new matter and is comparing your firm with a firm whose bills have been murky and expensive. Guess which law firm is likely to get the client's nod for the new matter? Law firms that leverage legal analytics stand to get more engagements and more profitable engagements.

Against this backdrop of the field of legal analytics, this article discusses examples of those types of decisions that tend to drive up the cost of bills, some possible reasons for those decisions, and how data-analytics tools can help price and evaluate the economics of legal services. The article also makes some recommendations for

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11. *See* THOMAS REUTERS, DYNAMIC LAW FIRMS STUDY 6–7 (2017), http://www.legalexecutiveinstitute.com/wp-content/uploads/2017/10/2017-Dynamic-Law-Firms-Study.pdf [https://perma.cc/66XG-87WA].

12. Of course, we're assuming that factors like "I want to use this person because he is known to me" won't interfere with the choice of professional for a given task. Our friend Randy Gordon made a similar point in reviewing an earlier draft. *See* E-mail from Randy Gordon to Nancy Rapoport (Nov. 30, 2018) (on file with authors and the Georgia State University Law Review) [hereinafter E-mail from Randy Gordon].

how both clients and law firms can use legal-analytics tools to benefit from greater control, on the front end, of legal costs.

I. Decision-Making at the Edges: Staffing, Redrafting, and All-Out Zealousness

In what some lawyers may well have termed the good old days, many legal bills were one-line affairs: "For services rendered, $X." Clients paid those bills, but this is no longer the case. Clients want to know more about what components go into the bottom-line bill: who worked on the matter, on which tasks, and for how many hours.[13] In many situations, clients (at least large, institutional ones) have more leverage to negotiate those bills, and those clients with leverage have set budgets and drawn lines in the sand, often in formal billing guidelines, regarding what they will, and will not, pay.[14] Often, they

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13. Nancy B. Rapoport, *The Case for Value Billing in Chapter 11*, 7 J. Bus. & Tech. L. 117, 142–43 (2012).

> Lawyers developed hourly billing as a way of reassuring clients that the work that they were doing for the clients was reasonable. In a study of the economics of hourly billing, George Shepherd and Morgan Cloud suggested that the shift to hourly billing from fixed-fee billing stemmed from a change to more liberalized discovery rules. The documentation of time spent on a particular matter—as opposed to the classic one-line bill of "for services rendered, $x"—gave clients a way to measure the effort that the lawyers had expended. This client-centric development, though, then became a way for a law firm to "measure . . . the utility of the worker and . . . the success of the firm itself." The more billable hours racked up (at least, the more billable hours that resulted in income for the firm), the better off the firm expected its finances to be.
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> Billable hours can provide some information about how "productive" a lawyer is and how profitable her firm is—but, to paraphrase Jane Austen, it is a truth universally acknowledged that when firms base their reward structures on billable hour totals, they're encouraging billing abuse, which is a particularly virulent form of unethical behavior.

Randy D. Gordon & Nancy B. Rapoport, *Virtuous Billing*, 15 Nev. L.J. 698, 713–14 (2015) (footnotes omitted).

14. Rapoport, *supra* note 13, at 142–43. Chapter 11 bankruptcy cases are often an exception to this general rule that clients push back on bills, in part because the payment of those bills often does not come out of the debtor's budget but from the pockets of unsecured creditors. For other cases, bills get paid out of funds carved out of secured creditors' collateral. Even the unsecured creditors' committee may not be able to provide an in-depth review of the fees of its own professionals, and for the same reason: the funds to pay those bills aren't coming from the budget of a single entity. *See, e.g.*, Nancy B. Rapoport, *Rethinking Fees in Chapter 11 Bankruptcy Cases*, 5 J. Bus. & Tech. L. 263, 265 (2010).

won't pay for summer associates or first-year lawyers' work; they won't pay for numerous interoffice conferences; and they won't pay for first-class travel or alcohol with meals.[15] Generally, law firms are agreeing in advance to abide by those terms. But do those agreements "stick"?[16]

Think about how large and foreboding the average legal bill looks to a client. (If you've never seen a large legal bill, think back to any hospital bills that you've seen.) They can go on for pages and pages (or screens and screens),[17] and they tend to be organized by date. For each date in a billing cycle on which work was performed, the bill lists who worked on a matter, what each professional did, how long the work took (typically, these days, in six-minute billing increments), and each professional's billing rate. For bills longer than a few pages, the amount of time it would take to go through each element in a bill is enormous. When the time entries are vague ("discuss strategy") or lumped together ("prepare for and attend hearing"; "research, draft, and revise contract"), parsing the bills becomes exponentially more difficult, especially when done manually. Zoning out while reviewing a stack of time entries is understandable. But without some way of analyzing the bills systematically or programmatically, clients must hope that the work

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15. *See* Matthew Guarnaccia, *Clients Leaving Firms with the Bill for Research*, LAW360 (Mar. 20, 2017, 4:44 PM), https://www.law360.com/articles/903628/clients-leaving-firms-with-the-bill-for-research [https://perma.cc/4228-NVFZ]; Sara Randazzo, *Corporate Clients Push Back After Law Firms Hike Starting Salaries*, WALL ST. J. (updated June 15, 2016, 7:05 PM), https://www.wsj.com/articles/companies-push-back-at-law-firms-starting-salary-hikes-1466029554 [https://perma.cc/3VKF-LFTU].

16. The Association of Corporate Counsel has published outside-counsel billing guidelines that are a good starting point. *See Billing Guidelines—Outside Counsel*, ASS'N CORP. COUNS. (Mar. 4, 2014), https://www.acc.com/_cs_upload/vl/membersonly/SampleFormPolicy/1362010_1.pdf [https://perma.cc/4U2W-DZV9]. Establishing outside-counsel billing guidelines should be more than a "check-the-box" exercise in which a legal department creates billing guidelines that simply "sit in the bottom drawer" unenforced. Legal analytics tools can be tailored to outside-counsel billing guidelines to allow for an automated and programmatic assessment of legal bills. Even with legal analytics, of course, it's the client's choice, and not the computer's choice, whether to pay or not to pay.

17. For years, clients have been using electronic billing systems (for example, Thompson Reuter's Legal Tracker, Quovant's LegalBill, and Mitratech's TeamConnect) for matter management and payment processing. These electronic billing systems interface with outside counsel's time entry and invoicing systems to allow for automated billing, approval, and payment transactions.

performed fell within the agreed-upon guidelines and must trust that the lawyers preparing the bills were both honest and attentive to the minutiae of who was doing what and when. Hope and trust are nice, but normally they're not enough.[18]

Let's think about the things that drive lawyers to perform certain tasks. First, most lawyers want to do a good job for their clients. They want to perform well, not just because they care about serving their clients but also because good, creative work is a source of professional pride. The most successful lawyers typically aced their grades in undergraduate programs and law school. They're used to being at the top of the pecking order, and they have taken that passion for success with them to the office. Second, competition for big, steady clients is intense, and the law firms that get the best results consistently—and that provide the fastest, most attentive service—can win and keep those high-paying clients. Third, choosing to leave a stone unturned may set a trap for the client later on: the unexamined paragraph and the unreviewed discovery can come back to bite the client (and, thus, the law firm). It's better to do a thorough job than risk that sad call to the malpractice carrier. Fourth, when a lawyer's own compensation is based on both the hours that he or she bills and the money that the firm collects, there's a natural disincentive to monitor every single task's efficiency.[19] And, finally, the ethics rules require lawyers to be competent[20] and diligent.[21] All of these factors push outside counsel to work harder and do more to serve clients who routinely defer to outside counsel when it comes to implementing matter strategy, management, and staffing.[22]

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18. Compare this statement to Ronald Reagan's famous quote: "Trust, but verify." See Barton Swaim, Opinion, *'Trust, but Verify': An Untrustworthy Political Phrase*, WASH. POST (Mar. 11, 2016), https://www.washingtonpost.com/opinions/trust-but-verify-an-untrustworthy-political-phrase/2016/03/11/da32fb08-db3b-11e5-891a-4ed04f4213e8_story.html?utm_term=.4a336d015089 [https://perma.cc/778P-G3Z6], for a brief history of Reagan's use of the phrase.

19. *See* Burk Notes, *supra* note 6, at 3.

20. *See, e.g.*, MODEL RULE OF PROF'L CONDUCT r. 1.1 (AM. BAR ASS'N 2016).

21. *See id.* at r. 1.3.

22. In his comments on an earlier draft of this article, Bernie Burk suggested four types of inefficiencies:

What happens when these factors—all of which are good things—combine? Expensive bills are the result.[23] Lawyers will justify bringing many people to a hearing or a meeting, instead of a few. After all, a diversity of experience will best serve the client, and having top-notch knowledge on hand will provide better service than having to wait for someone back at the office to provide an answer to a particular question. Lawyers who work their way up the law-firm ladder often have very specialized expertise, so having both Partner A (with expertise in one area of tax law) and Partner B (with a different expertise in tax law) in a meeting will catch any errors and help to come up with a better work product. For lawyers who are still working their way through the associate ranks, someone more senior must supervise their work. Junior Associate X's research will get supervised by mid-level Associate Y, who will do the first draft of a document, only to have senior Associate Z revise the document before handing it to a partner for final revisions. One lawyer in an office will pop into another lawyer's office to get some advice on a matter, and those pop-in meetings can span large blocks of time as the professionals spitball ideas. Even filing a pleading that simply states that one party agrees with some other party's position can result in significant billed time if more than one professional has to set eyes on the draft before it gets filed.[24] In a time-pressured

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> (1) Tending to do more things or take longer to do something simply because hours matter to the lawyer's personal standing and compensation (disseminated and in some cases created by the cognitive biases you describe);
> (2) Including too many people (or, to put it more generally, staffing anyone with less than substantial experience on a given task) because one thing the law firm is doing is training more junior lawyers, and there is debate about how much of that expense the client should bear;
> (3) Doing beautiful work because the lawyer gets pride (and reputational kudos) out of it rather than the client getting cost-effective service; and
> (4) Being excessively risk-averse because the client isn't really committed to the risks inherent in having counsel be cost-effective.

Burk Notes, *supra* note 6, at 4.

23. Outside counsel's preferences on strategy (for example, settle vs. litigate), management (coordinate day-to-day activities), and staffing (using an 8th-year lawyer vs. using a 3d-year lawyer) can control—or strongly influence—an engagement, and those choices often will result in an expensive bill. Legal analytics empower a client to have greater influence and a more proactive role in addressing these matters.

24. Nancy B. Rapoport, *The Client Who Did Too Much*, 47 AKRON L. REV. 121, 125 n.20 (2014)

environment, such as big, bet-the-company litigation or a takeover defense, the amount of work required is extensive. Long days are *de rigueur*, with tens of people amassed to finalize a single project. Many hands may make light work, but they certainly also make expensive work. In some very real sense, pride ("we do good work here") and fear ("what if we've missed something?")[25] combine to make legal fees rise exponentially. Pride and fear are the conscious explanations. But there are cognitive biases at work here, too.

II. Why Add to Legal Costs? Some Social Science Explanations

Let's take pride and fear as "givens." Good lawyers want to do good work, and they don't want to leave their clients unprotected. But because lawyers are human and are thus subject to countless cognitive biases, there are some subconscious activities going on as well.[26] We address just a few of them.

Take "anchoring," which involves focusing on one factor so much that one loses sight of other important factors.[27] In the classic experiment on anchoring,[28] experimental subjects were asked to count the number of times in a video the members of one basketball team passed the basketball to each other. Subjects frequently counted the number of passes while missing the visual of a person in a gorilla

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("Even when [bankruptcy] estate-paid lawyers are dealing with necessary actions, they might do so in wasteful ways. I've certainly seen examples of activity that seemed to exceed what was reasonably necessary. For example, there's nothing wrong with filing a statement that says 'me, too' to someone else's motion. But there's something wrong when a simple, two-page 'me, too' statement takes a full billable hour to draft.").

25. Some law firms may legitimately fear that a client's downward pressure on a bill will create a whiplash effect later: the client may ask the law firm to skip doing one or two things to save costs, those one or two things end up being very important later, and the client then blames the law firm for *not* doing those one or two things in the first place. *See* Burk Notes, *supra* note 6, at 3.

26. We heartily recommend two great resources for those who want to explore cognitive biases in depth: JENNIFER K. ROBBENNOLT & JEAN R. STERNLIGHT, PSYCHOLOGY FOR LAWYERS: UNDERSTANDING THE HUMAN FACTORS IN NEGOTIATION, LITIGATION, AND DECISION MAKING (2012), and Jennifer K. Robbennolt & Jean R. Sternlight, *Behavioral Legal Ethics*, 45 ARIZ. ST. L.J. 1107 (2013) [hereinafter Robbennolt & Sternlight, *Behavioral Legal Ethics*].

27. Robbennolt & Sternlight, *Behavioral Legal Ethics*, *supra* note 26, at 1132 n.141.

28*. See, e.g.*, Christopher Chabris & Daniel Simons, *Gorilla Experiment*, INVISIBLE GORILLA, http://www.theinvisiblegorilla.com/gorilla_experiment.html [https://perma.cc/Q9KC-62CY] (last visited Jan. 28, 2019).

suit passing among the two basketball teams. They anchored on counting the number of passes, even though most basketball courts don't feature gorillas walking around. Anchoring in terms of legal bills can occur when the client focuses, say, on what the highest billable rate will be for the engagement, rather than focusing on how the matter will be staffed (both in terms of the number of people and their relative experience). Anchoring can also occur when the client focuses on staffing (say, the number of attorneys who are allowed to work on the matter) without regard to whether the matter is an emergency. Although the old saying "there's fast, good, and cheap, but you can only get two of those at once" is true more often than not, anchoring focuses on only one of those three factors at a time.

"Social pressure"[29] can also be a factor affecting lawyer billing. How often does a law firm really train new lawyers (new to the firm, or new to the profession) on its culture of billing? Does the firm teach the new lawyer about when the time clock should start and stop? Does it start when a lawyer leaves a message for opposing counsel, even if the message is only thirty seconds long and the minimum billing increment is a tenth of an hour? Does revising a time entry to make it more clear (or less clear, if the bill will become public while the law firm is considering some private strategy on a case) count as billable time? Let's be fair to attorneys in private practice: keeping track of your professional life in one-tenth-of-an-hour increments is a real drag.[30] It's not unusual to hear attorneys who have transitioned from outside counsel to inside counsel say that "keeping time" is one aspect of private practice that they don't miss. When billing policies aren't clear—and they often aren't—new professionals in a firm will take their cues from how more senior

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29. For a useful discussion of social pressure, see, for example, Saul McLeod, *Solomon Asch— Conformity Experiment*, SIMPLY PSYCHOL. (updated Dec. 28, 2018), https://www.simplypsychology.org/asch-conformity.html [https://perma.cc/D2ZY-BNF3].

30. Keeping time contemporaneously with undertaking work tasks truly can be an annoyance and imposition upon timekeepers who need to meet strict deadlines for a client's substantive work. We applaud those attorneys in private practice who record and submit time on a daily (as opposed to a weekly or monthly) basis. One can imagine how weekly or monthly timekeeping impairs time recordation accuracy.

people describe their billing practices. If new people hear more senior people saying that they bill even thirty seconds of work because the firm has a minimum billing increment of .1 per hour, they're more likely to round up thirty seconds to six minutes as well. And those six-minute increments can add up quickly if ten, or twenty, or fifty professionals are each billing thirty seconds of time as six-minute increments or if they're billing eight-minute increments as two-tenths of a billable hour.[31] As everyone who has children knows (or who knows people who have children), peer pressure is a powerful thing (and a potentially costly thing when attorneys' fees are involved).

And our old favorite, cognitive dissonance,[32] also plays a role, as people who would never dream of doing something unethical manage to talk themselves into fudging their hours or lying to a court. Here's how cognitive dissonance can play out in legal billing.

> One day, not too long after you start practicing law, you will sit down at the end of a long, tiring day, and you just won't have much to show for your efforts in terms of billable hours. It will be near the end of the month. You will know that all of the partners will be looking at your monthly time report in a few days, so what you'll do is pad your time sheet just a bit. Maybe you will bill a client for ninety minutes for a task that really took you only sixty minutes to perform. However, you will promise yourself that you will repay the client at the first opportunity by

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31. We asked Legal Decoder's team to run database queries over billions of legal spend data to find interesting examples of billing patterns in one-tenth-of-an-hour increments. The following interesting pattern surfaced: In one matter spanning several months, a single timekeeper recorded 1,004 line-item entries, 808 of which were billed in a 0.1-hour increment for tasks like reading a one-paragraph court order, reviewing a routine deposition notice, and leaving voicemails. Unquestionably, this timekeeper adhered to all billing guidelines and did nothing wrong per se, but is real "value" being delivered? Perhaps so, or perhaps this is an example of someone playing within the rules of the game but gaming the system.

32. For a good discussion of cognitive dissonance, see, for example, Saul McLeod, *Cognitive Dissonance*, SIMPLY PSYCHOL., https://www.simplypsychology.org/cognitive-dissonance.html [https://perma.cc/Z7KF-RHBL] (last visited Jan. 28, 2019).

doing thirty minutes of work for the client for "free." In this way, you will be "borrowing," not "stealing."

And then what will happen is that it will become easier and easier to take these little loans against future work. And then, after a while, you will stop paying back these little loans. You will convince yourself that, although you billed for ninety minutes and spent only sixty minutes on the project, you did such good work that your client should pay a bit more for it. After all, your billing rate is awfully low, and your client is awfully rich.

And then you will pad more and more—every two[-]minute telephone conversation will go down on the sheet as ten minutes, every three[-]hour research project will go down with an extra quarter hour or so. You will continue to rationalize your dishonesty to yourself in various ways until one day you stop doing even that. And, before long—it won't take you much more than three or four years—you will be stealing from your clients almost every day, and you won't even notice it.[33]

Not only is cognitive dissonance happening in this vignette ("you did such good work that your client should pay a bit more for it"), but also the way that the first misstep is framed (not "stealing," but "borrowing" against future time) contributes to what can undermine a good attorney–client relationship or even eventually devolve into fraud on the client. Much like the hope and trust that a client places in a relationship partner who reviews, approves, and sends a legal bill to a client, so too must the relationship partner place hope and trust in his or her partners, associates, and other professionals that their time

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33. Douglas R. Richmond, *For a Few Dollars More: The Perplexing Problem of Unethical Billing Practices by Lawyers*, 60 S.C. L. REV. 63, 107–08 (2008) (footnote omitted) (quoting Patrick J. Schiltz, Symposium, *On Being a Happy, Healthy, and Ethical Member of an Unhappy, Unhealthy, and Unethical Profession*, 52 VAND. L. REV. 871, 917 (1999)).

entries are clear and concise and that they accurately reflect recorded time for work both needed and completed. A relationship partner should know a great deal about all aspects of the matter being billed, but all attorneys, irrespective of title or seniority, have an ethical duty to keep their legal fees reasonable.[34]

All of these myopic and subconscious behaviors can contribute to whopping legal bills, and when the bills are lengthy and organized by date, ferreting out real and valuable work by hand is well-nigh impossible for both the relationship partner and the client. But don't despair. That's where legal analytics can help to save the day, both for law firms and their clients.

III.   Leveraging Legal Analytics Tools to Drive Better Outcomes and Compete Effectively in a Changing Legal Industry

In the legal industry, legal analytics isn't just a trendy phrase. Experts have been touting the merits of legal analytics for several years.[35] The movement has now firmly taken root in an effort to improve the cost predictability, efficiency, and effectiveness of legal services through data-driven decision-making.[36]

For lawyers who are just becoming conversant with legal analytics, rest assured that successful legal analytics efforts will not result in "Robot Law" or a machine lawyer that takes all of our jobs away. When law firms and clients use legal analytics intelligently, the resulting data provide a supplemental information source that augments how legal professionals manage and deliver legal services. Of course, the use of legal analytics requires open-mindedness and some behavioral changes from legal professionals, as well as a deep understanding by data scientists of how lawyers think and work.

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34.   MODEL RULE OF PROF'L CONDUCT r. 1.5 (AM. BAR ASS'N 2016); *id.* at 5.1; *id.* at 5.2.

35.   James E. Holloway, D. Tevis Noelting, Aaron Pennington & Vanessa Johnson, *Law and Business as a School of Thought: A Pedagogy to Teach the Theory and Practice of the School*, 18 U.C. DAVIS BUS. L.J. 215, 217–18 (2018).

36.   *Id.*

Multitudes of lawyers claim that they attended law school due to a self-diagnosis of being "mathematically challenged."[37] It logically follows that, for many attorneys, the concept of legal analytics is shrouded in mystery because math might be involved. Like most data science offshoots, legal analytics certainly involves some number-crunching. Even so, legal expertise and judgment, process management, and strategic business acumen are at least as important for the proper use of legal analytics.

The good news is that today's industry leaders are embracing technology, innovation, data, and process change as ways to improve their business results.[38] Every expert will agree that adopting legal analytics is not a "flip-the-switch" exercise, where lawyers one day suddenly practice law according to a pre-defined recipe. Legal analytics involves a long-term paradigm shift toward intelligent process change. Simply put, legal analytics makes sense. By using legal analytics, clients can realize greater value and results from their legal spend, and law firms can operate more efficiently (and more profitably) with greater client attraction, retention, and satisfaction. Why do we say more profitably? Because the realization rate (the amount that the client actually pays) is far more important than what the law firm bills to the client. If a client doesn't pay all of the bill, that lost time—and lost income—is gone forever.

In this Part, we define legal analytics, explore legal analytics in the context of the broader data analytics industry, discuss some valuable legal analytics metrics, and share a case study showing the value of implementing data analytics as a business tool.

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37. *See, e.g.*, Eric Fuchs, *The 8 Worst Reasons to Go to Law School*, BUS. INSIDER (Oct. 21, 2012, 8:26 AM), https://www.businessinsider.com/bad-reasons-to-go-to-law-school-2012-10#1-i-dont-know-what-to-do-with-my-life-8 [https://perma.cc/L6CR-WSLE] (quoting U.S. Supreme Court Chief Justice John Roberts: "I think there are a lot of people who go to law school because they're not good at math and can't think of anything else to do"); Debra Cassens Weiss, *Posner: Lawyers Bad at Math Are an Increasing Concern; Inmate's Blood-Pressure Suit Shows Why*, A.B.A. J. (Oct. 29, 2013, 12:51 PM), http://www.abajournal.com/news/article/posner_math_block_lawyers_an_increasing_concern_inmates_blood-pressure_suit [https://perma.cc/77V2-C4CT].

38. Holloway, Noelting, Pennington & Johnson, *supra* note 35, at 217.

A.   Getting Familiar with Legal Analytics

The starting point of any meaningful discussion of legal analytics begins with its definition. As a new and rapidly evolving discipline, legal analytics can be defined as the process of using technology to transform raw data associated with any aspect of the legal industry into actionable information and insights used by legal industry participants to develop, analyze, forecast, and/or manage legal risks and opportunity; legal strategy; matter management; legal process management and improvement; and legal department and law firm financial and business operations.[39]

The raw data fueling legal analytics derive from many sources, including laws and regulations, regulatory filings and other types of public records (e.g., USPTO applications, SEC filings, and land records), judicial records, billing records, law firm and client databases, and legal-industry secondary resources (e.g., surveys and compilations).[40]

In many instances, the raw data are useful only to a particular type of audience. For example, the raw data in a patent application for a single semiconductor device can help the patent holder, its business associates, and potential infringers. Most others probably would find the patent application, by itself, to lack widespread usefulness. If, however, the raw data contained in that patent application are standardized, aggregated with other patent-application information, and intelligently structured,[41] then the patterns and trends can be used to make future decisions.

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39. *See* Legal Decoder, Powering the Section 330 Legal Fee Analysis: A Retrospective Case Study 1 (2016), https://static1.squarespace.com/static/586ea31b9f74567913da6257/t/589b3a6d8 93fc0bb3ba431c7/1486568052591/Legal+Decoder+Bankruptcy+Case+Study.pdf [https://perma.cc/8MVC-K7R7].

40. *See, e.g.*, Brian C. Howard, Top Law Firm Report for Select Federal Litigation 2018, at iii (Mar. 2018), https://www.americanbar.org/content/dam/aba/events/professional_responsibility/2018_ cpr_meetings/2018conf/materials/session1_ethics_issues/session1_all_materials.authcheckdam.pdf [https://perma.cc/6USQ-AME5].

41. This process, called "data scrubbing" or "data cleansing," involves modifying or removing data in a database that is incorrect, incomplete, improperly formatted, or duplicated. The goal of data scrubbing is to optimize the statistical accuracy of the data output. *What Is Data Cleansing?*,

Indeed, when raw data are analyzed and transformed into data analytics insights, an end user can uncover important trends, averages, correlations, and patterns. Legal professionals and other decision makers no longer need to rely on guesswork or intuition when evaluating "what happened," "how or why it happened," and "what's likely to happen next."

For legal industry leaders, the practical application of legal analytics provides invaluable information that can improve the value of legal services. For example, current data analytics tools analyze motions and rulings to predict how likely a judge is to grant or deny a specific motion, how long it takes to get to a permanent injunction, and where to initiate litigation across different venue choices.[42] Data analytics tools are helping clients and law firms establish appropriate fee arrangements[43] and pricing benchmarks to forecast task-based costs and avoid pricing misfires and runaway fees.[44] Outside counsel's "win" rates in specific courts and for particular cases are the focus of a legal analytic tool intended to guide attorney engagement decisions.[45] A professor from Chicago-Kent School of Law has co-founded a company that offers legal analytic tools to predict legal outcomes for such disparate events as Supreme Court cases and congressional bills.[46] By leveraging one of the largest raw data pools in the legal industry—law-firm billing data—companies are offering law firms and legal departments alike the data analytics tools that analyze mounds of billing data to measure and peer-

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WISEGEEK, https://www.wisegeek.com/what-is-data-cleansing.htm [https://perma.cc/TAZ4-F5VX] (last visited Jan. 28, 2019).

42. *See Legal Analytics Platform*, LEX MACHINA, https://lexmachina.com/legal-analytics/ [https://perma.cc/LQ5G-HWKM] (last visited Jan. 28, 2019).

43. *See, e.g.*, Dwayne J. Hermes, Erica R. LaVarnway & Nancy B. Rapoport, *A Solutions-Oriented Approach: Changing How Insurance Litigation Is Handled by Defense Law Firms*, 2017 J. PROF. LAW. 129, 135.

44. *See Legal Billing Data Analysis at Your Fingertips*, LEGAL DECODER, https://www.legaldecoder.com/ [https://perma.cc/WKS8-CJP8] (last visited Jan. 28, 2019).

45. *See* PREMONITION, http://www.premonition.com [https://perma.cc/F39K-BK3P] (last visited Feb. 4, 2019).

46. *See* LEXPREDICT, https://www.lexpredict.com [https://perma.cc/Q3A9-DHGW] (last visited Feb. 20, 2019). Professor Daniel Katz's company, LexPredict, was recently acquired by Elevate Services, a law company that offers products and legal-processing outsourcing services to the legal industry.

benchmark a lawyer's or firm's efficiency level, which is a critical cost driver in all outside-counsel fee arrangements.[47]

The small handful of examples above illustrates that legal analytics is not a one-size-fits-all proposition or solution. As McKinsey & Company noted in its instructive 2016 article on big data analytics, "performance—not pristine data sets, interesting patterns, or killer algorithms—is ultimately the point. Advanced data analytics is a means to an end. It's a discriminating tool to identify, and then implement, a value-driving *answer*."[48]

For the legal industry, legal analytics can improve business decisions and results, but one only gets to the right answers if one asks the right questions. Without a thoughtful and structured approach to legal analytics, the "garbage in, garbage out" (GIGO) mantra undermines the initiative.[49] Anyone embarking upon a legal analytics initiative should solicit broad input from the management team when identifying key business questions, aligning incentives, fostering cross-disciplinary collaboration across business areas, and insisting that legal analytics insights be used consistently (and periodically re-evaluated for effectiveness). That process becomes a roadmap for success, both for law firms and for their clients.

B. *Legal Analytics' Place in the Overall Data Analytics Market (Is Anyone Surprised?)*

The global data analytics market is on track to reach $166 billion in 2018 and projected to grow at a 12% compound annual growth rate to $275 billion by 2023.[50] The market is typically segmented by

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47. See *infra* Section IV, for a case study of Legal Decoder, Inc.'s Pricing Engine pilot program.

48. *See* Helen Mayhew et al., *Making Data Analytics Work for You—Instead of the Other Way Around*, MCKINSEY Q., Oct. 2016, https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/making-data-analytics-work-for-you-instead-of-the-other-way-around [https://perma.cc/S6J3-M6KQ].

49. *Id.*

50. Market Research Future, *Big Data Analytics Market 2018 Global Size, Share, Growth Opportunities and Industry Forecast by Type, Price, Regions, Key Players, Trends and Demand by 2023*, HERALD KEEPER (Aug. 27, 2018), http://heraldkeeper.com/market/big-data-analytics-market-2018-global-size-share-growth-opportunities-industry-forecast-type-price-regions-key-players-trends-demands-2023-104850.html [https://perma.cc/PDZ6-HJYQ].

end-user characteristics. End users in the manufacturing, banking, government, insurance, transportation, utilities, and telecommunications sectors comprise most of the market, with banking and manufacturing alone accounting for nearly 50% of the market.[51] The issues generating the most demand for data analytics involve security and compliance[52] and customer-experience data that highlight customer engagement, retention, and satisfaction trends. Notably, neither the legal industry nor any tangentially related industry segment has ranked anywhere near the top end users of data analytics, even though the benefits are tangible.

Until recently, legal services have been almost entirely consultative, qualitative, and advisory in nature.[53] Statistics have taken a back seat to experience.[54] Indeed, one of the primary benefits of hiring outside counsel, particularly very seasoned attorneys, has been to leverage outside counsel's depth and breadth of experience, not just their technical legal skills. A client who has hired counsel with thirty or forty years of experience practicing law benefits from a historically guided litigation strategy and time-tested negotiation tactics.[55] Throughout the golden age of the legal industry, experience operated as a surrogate for a portion of what Big Data can offer.[56] If clients adopt legal analytics on a widespread basis, though,

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51. *Id.*

52. JOSEPH BLANKENSHIP, THE FORRESTER WAVE: SECURITY ANALYTICS PLATFORMS, Q3 2018, at 9 (2018); JAMES RICHARDSON ET AL., CRITICAL CAPABILITIES FOR ANALYTICS AND BUSINESS INTELLIGENCE PLATFORMS 30 (2018).

53. The ABA Rules of Professional Conduct require an attorney "[t]o 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." MODEL RULES OF PROF'L CONDUCT r. 1.01 cmt. 8 (AM. BAR ASS'N 2016) (emphasis added). The italicized phrase was recommended by the ABA in 2012 when it approved a change to the Model Rules of Professional Conduct to make clear that lawyers have a duty to be competent in the law and its practice and also in technology integral to the practice of law.

54. *But see* Hermes et al., *supra* note 43, at 135.

55. Law firm billing rates place a premium on this type of lawyer's experience.

56. Mark A. Cohen, *The Golden Age of the Legal Entrepreneur—Why Now and Why It Matters*, FORBES (June 1, 2018, 5:57 AM), https://www.forbes.com/sites/markcohen1/2018/06/01/the-golden-age-of-the-legal-entrepreneur-why-now-and-why-it-matters/#4a4b95477803 [https://perma.cc/E5RZ-99MT].

experience will no longer be the sole distinguishing factor. Client behavior will drive law firm behavior here.

Without question, the unique character traits[57] of legal professionals have led to the slow adoption rate of legal analytics (or perhaps their outright reluctance to use legal analytics); however, those factors are fading away quickly, and an environment welcoming a new data-driven era is taking shape.

1. Today's Legal Industry Leaders See Technology and Legal Analytics as Imperative for Survival

Change is hard, especially for lawyers who have been doing the same things the same way for the past thirty to forty years. Prior to the Great Recession of 2008, the demand for legal services increased steadily, and competition came only from other firms and attorneys. Consequently, the now-departing generation of legal industry leaders hasn't had much incentive or inclination to change or innovate. Now, we're watching the legal industry getting remade before our eyes. The next generation of legal industry leaders, whether at law firms or in charge of a client's legal department, has now ascended to positions of power and influence.[58] They understand current market dynamics much better than their predecessors and realize that lawyers are not going to make the same money if they practice law

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57. Some consider these "unique character traits" to be flaws. They include "technophobia," "entrenchment/change aversion," and "being mathematically challenged." *See* Joe Dysart, *Mind Meld: How to Understand Legal Minds to Defeat Tech Fears*, A.B.A. J. (July 2012), http://www.abajournal.com/magazine/article/mind_meld_how_to_understand_legal_minds_to_defeat_te ch_fears [https://perma.cc/AHM4-TWPW] (explaining "technophobia" in the legal community); James Goodnow, *A Crisis of Confidence in Law Firms*, ABOVE L. (June 1, 2018, 1:27 PM), https://abovethelaw.com/2018/06/a-crisis-of-confidence-in-law-firms/ [https://perma.cc/AHM4-TWPW] (detailing "lawyers doubting their ability to manage change"). *See generally* Peggy Kubicz Hall, *I've Looked at Fees from Both Sides Now: A Perspective on Market-Valued Pricing for Legal Services*, 39 WM. MITCHELL L. REV. 1 (2012); Robbennolt & Sternlight, *Behavioral Legal Ethics*, *supra* note 26.

58. Julie Triedman, *The Millenials: Meet the New Boss*, AM. LAW., Mar. 2016, http://legalcommentator.com/pdf/american-lawyer-here-come-the-millennials.pdf. At age 34, James Goodnow became the President and Managing Partner of Fennemore Craig, P.C. *See James Goodnow*, FENNEMORE   CRAIG,   P.C.,   https://www.fclaw.com/people/attorneys/e-j/goodnow-james [https://perma.cc/9NTH-5GUP] (last visited Feb. 4, 2019).

the way that it has always been practiced.[59] They are embracing change and innovation. Technology, data analytics, and legal-process management are the norm for those legal industry leaders who, unlike their innovation-phobic predecessors, now demonstrate a readiness for change.

Although legal analytics has largely been touted as a BigLaw-driven movement that primarily benefits BigLaw firms and their clients, we suspect that legal analytics can also help those legal professionals practicing in a non-BigLaw context. At smaller law firms, legal analytics initiatives could be implemented expeditiously.[60] Legal professionals practicing in a smaller context may stand to benefit from legal analytics more than their larger counterparts because data insights can operate as a cost-effective surrogate for the experience of throngs of high-priced colleagues. Moreover, data analytics functions as the great equalizer, leveling the playing field for smaller firms that lack their own large data pools but can benefit from the data generated by larger counterparts. Whether at a small or large organization, progressive legal industry leaders are viewing legal analytics as vital to their survival in an increasingly competitive and cost-sensitive market.[61]

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59. *See James Goodnow*, *supra* note 58.

60. *See, e.g.*, Hermes et al., *supra* note 43, at 135.

61. Mark A. Cohen, *Law Is a Profession and an Industry—It Should Be Regulated That Way*, FORBES (Mar. 29, 2018, 6:39 AM), https://www.forbes.com/sites/markcohen1/2018/03/29/law-is-a-profession-and-an-industry-it-should-be-regulated-that-way/#5438707b6598 [https://perma.cc/6NF9-VBLU]; *see* Elizabeth Olson, *PwC, the Accounting Giant, Will Open a Law Firm in the U.S.*, N.Y. TIMES (Sept. 22, 2017), https://www.nytimes.com/2017/09/22/business/dealbook/pwc-law-firm-ilc.html [https://perma.cc/N57D-4467]; Ben Wheway, *PwC Forms Alliance with US Firm, Furthering Big Four's Ambitions in Law*, AM. LAW. (Sept. 24, 2018, 7:00 AM), https://www.law.com/americanlawyer/2018/09/24/pwc-forms-alliance-with-us-firm-furthering-big-fours-ambitions-in-law/ [https://perma.cc/HE4G-N2PS]. PwC and Deloitte expanded their core accounting and auditing services into a broad range of data-driven business-consulting services and software-development services and product offerings. Each of those firms is a one-stop shop with the ability to leverage client relationships and business intelligence to cross-sell multiple product offerings. Likewise, law firms must sell more than just legal services to keep competitive. Admittedly, law firms can't develop technologies overnight, but they do have the wherewithal to develop strategic relationships with, or acquire technologies or technology companies that appeal to, their broader client base. Technologies that leverage a law firm's data are the most natural, initial fit for a product offering and pose a formidable challenge to any Big Four competitor. The most progressive law firm leaders are following the path charted by the Big Four to develop product offerings, and they no longer feel

2.   Clients Expect All Attorneys to Embrace Innovation in the Context of their Business

All attorneys (whether in private practice, in-house, government, or academia) are expected to be technology and data savvy.[62] Clients are starting to expect law firms to leverage data analytics technology, create new service-delivery models, and expand core competencies to include legal analytics. Quite simply, client value is the driving force behind data analytics adoption because that's where the money is. Legal analytics initiatives must meet a client's goals and expectations for legal-service delivery, budget, and outcome. To meet goals and expectations, legal analytics tools must enhance the client's overall business and operational model, growth strategy, culture, resources, and core strengths. The strength of what legal analytics can provide—predictability, accuracy, and consistency of service delivery—may, under many circumstances, matter more than the speed of delivery of those services. Alternatively, the legal department may sacrifice quality for speed—or stress all of those factors and be willing to pay a premium for excellence in all of them.[63] At bottom, successful legal analytics efforts start with understanding how to maximize value for clients.

3.   There Is Plenty of Talent to Assemble a Top-Flight Legal Analytics Team

Relying on attorneys alone to spearhead a legal analytics initiative is a fool's errand. After all, part of legal analytics involves mathematics.[64] Other legal professionals must be involved in the effort. Historically, the non-attorney employee roster at BigLaw

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constrained by driving revenue only from legal services (other than the ethics rules related to law-related services). *See* MODEL RULES OF PROF'L CONDUCT r. 5.4, .7 (AM. BAR ASS'N 2016).

62.   *See* D. Casey Flaherty, *Unless You Ask: A Guide for Law Departments to Get More from External Relationships*, ASS'N CORP. COUNS. 11 (2016), https://uplevelops.com/wp-content/uploads/2017/12/Unless-You-Ask-A-Guide-For-Law-Departments-to-Get-More-From-External-Relationships.pdf [https://perma.cc/5ERG-244C]); Weiss, *supra* note 37.

63.   *See* E-mail from Randy Gordon, *supra* note 12.

64.   *See* Weiss, *supra* note 37.

firms and legal departments has consisted of executive assistants, paralegals, librarians, and support staff, most of whom (though broadly skilled) have become pigeonholed into administrative roles in a traditional organizational structure. In the past eight to ten years, however, larger legal departments and law firms have been hiring a new breed of industry experts to oversee legal-industry-specific business operations,[65] such as legal analytics, technology sourcing, legal-process management, pricing, client-outside counsel relations, and financial performance.

On the client side, these Legal Department Operations (LegalOps) experts are tasked with creating greater predictability and standardization in the legal department. On the law firm side, experts with titles like Chief Practice Management Officer, Chief Project Management Officer, or Chief Pricing Officer are helping law firms identify where waste, friction, and redundancy hinder efficient workflow processes.[66] These experts are immensely effective in building legal analytics initiatives and can translate legal analytics principles into a construct that lawyers can understand and embrace.

4. *Legal Technology Has Arrived in Force*

"LegalTech" innovators (e.g., LegalZoom, Fastcase, RocketLawyer, etc.) have revolutionized how legal services are undertaken, delivered, priced, and evaluated. Anyone involved in the legal industry can attest that technology is heavily influencing the practice of law today. The tidal wave of innovation keeps gaining momentum. The emergence of legal analytics is transforming the next generation of legal services into an era marked by mass customization for certain types of practices and a mix of quantitative

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65. *See* LEGAL MKTG. ASS'N & BLOOMBERG LAW, WHERE ARE WE NOW? REVEALING THE LATEST TRENDS IN LEGAL MARKETING AND BUSINESS DEVELOPMENT 14 (Apr. 2018).

66. *See* Amanda Brady & Amy Mallow, *A Chat with Perkins Practice Management Chief Toby Brown*, LAW360 (May 17, 2018, 4:12 PM), https://www.law360.com/articles/1044848/a-chat-with-perkins-practice-management-chief-toby-brown [https://perma.cc/25Q2-AZZ3]; *see also* Aebra Coe, *The Rise of Pricing Professionals in BigLaw*, LAW360 (Jan. 8, 2018, 5:11 PM), https://www.law360.com/articles/999187/the-rise-of-pricing-professionals-in-biglaw [https://perma.cc/JKJ7-BV5U].

(billable hours) and qualitative (value of those services) for other types of practices. Even though the legal industry has failed to keep pace when it comes to leveraging data analytics, the technological stage is surely set for legal professionals to play catch-up.

C. Legal Analytics Make Pricing and Economically Evaluating Legal Services Easier

> *"Big data is like teenage sex: everyone talks about it, nobody really knows how to do it, everyone thinks everyone else is doing it, so everyone claims they are doing it."*

Dan Ariely

For a few years now, Professor Ariely's quote has been making the rounds.[67] Elements of it still hold a great deal of truth, and we can update the 2013 teenager metaphor to a 2018 twenty-something metaphor: A few are doing Big Data fairly well now. Many are trying it with mixed outcomes. Some want to try it but haven't determined how and where to start.

Because legal analytics is not a one-size-fits-all solution, it's not surprising that many legal professionals often are overwhelmed by the possibilities. Not every lawsuit turns on how likely a judge is to grant or deny a specific motion; not every organization wants to evaluate litigation venue choices; and not every legal professional needs to predict legal outcomes for U.S. Supreme Court cases.

Almost universally, however, people care deeply about the cost of legal services and whether they are getting optimal value for each dollar spent on those services. Legal billing systems and law-firm invoices contain an ocean of rich data which, when intelligently transformed into legal analytics, can affect the cost and efficiency of legal services. Legal analytics tools empower users to analyze legal spend and efficiency levels. For the legal professional who is new to

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67. *See* Dan Ariely (@danariely), TWITTER (Jan. 6, 2013, 8:02 AM), https://twitter.com/danariely/status/287952257926971392?lang=en [https://perma.cc/3CYS-HB7A].

legal analytics, analyzing legal spend is the natural starting point. In this regard, the metrics make a difference.

1. *Staffing Efficiency*

To ensure the greatest value in hourly billing arrangements, one would begin by optimizing the staffing mix of legal professionals. The most competent, lowest-cost legal professional should handle skill-set-appropriate tasks in the right amount of time. With legal analytics tools, each task in a line-item entry that has been handled by outside counsel's team now can be reviewed for skill-set appropriateness. The review of individual line items in a bill, which used to take hours and days (and thus was rarely done thoroughly), can now take seconds. Because enough tasks handled by outside counsel recur with sufficient frequency on an industry-wide basis, legal analytics can provide benchmarks for costs, time, and skill sets required for individual tasks. Therefore, low-risk, low-value work can be easily identified by data analytics tools that surface metrics around time input, seniority levels, tasks, and pricing. Once key metrics are identified, future legal work can be re-deployed in a cost-effective manner. As a clear example, benchmarks can tell a client— and the client's law firm—when legal research is routine enough to be done by a junior associate and when it is tricky enough, or novel enough, for a partner to do a better and more efficient research job.

The practical upshot of evaluating and monitoring staffing efficiency may be as simple as leaving legal work with the same outside law firm with a simple re-shuffling of staffing resources. Sometimes, it may mean re-diverting some tasks to lower cost, alternative service providers, like legal-process outsourcing companies or discovery robots. Either way, forward-thinking legal professionals are now empowered with solutions that help them easily understand, drive, and capitalize on optimal staffing efficiency.

2. Workflow Efficiency

Workflow efficiency measures and seeks to eliminate waste, friction, and redundancy in the delivery of legal services. Legal professionals, much like their production and operational-management peers, are now encouraged to optimize the process of working on an engagement for a client by paying attention to the way that the work flows from person to person. Thinking seriously about the work flow, setting standards for who does which tasks, continually evaluating the process, and identifying opportunities for improvement all make for a better product for the client. Intelligently designed legal analytics tools can facilitate this effort. For instance, a well-built legal analytics tool will pinpoint when multiple legal professionals participate on or attend a single phone call, meeting, or closing; identify the frequency with which various types of tasks recur; and analyze whether their recurrence is delivering true client value.

3. Billing Hygiene

As long as hourly billing persists in the legal industry, good billing hygiene is essential when it comes to understanding what tasks were handled during each billable hour. Far too often, invoices for legal services rendered contain line-item entries that run the gamut from being vague and cryptic (e.g., "review file," "attention to tax issue," "consider negotiation strategy," and the like) to being so over-descriptive that the line-item entry doesn't provide easily discernable value. Good billing hygiene means recording clear, concise, informative narrative entries linked to the time to complete an individual task. Neither law firms nor clients benefit from bad billing hygiene. The time entry "Attention to file—2.1 hours" is unhelpful today and even less helpful tomorrow when trying to price legal services with certainty.[68] One cannot manage toward pricing

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68. As one of us has said before (and as we both have thought, repeatedly), "attention to file" has never told a single client what the biller actually did. Nancy B. Rapoport, *"Nudging" Better Lawyer*

certainty without a way to measure the likely tasks that would go into a pricing model. Legal invoice data riddled with bad billing hygiene is inherently unmeasurable. But legal analytics tools can highlight where bad billing hygiene has occurred to help attorneys reflect upon the efficiency of their legal work, change their bad habits, and help with the predictability necessary to budget properly for legal services.

4. Pricing

One of the legal industry's biggest challenges is pricing uncertainty.[69] Every year, $60 billion is up for grabs between clients and their law firms.[70] Neither clients nor law firms created this pricing uncertainty. Instead, the uncertainty has been precipitated by disruptive third-party forces that have been pushing the legal industry toward good budgeting as a way to better serve clients.[71] For an industry that uses a "time x hourly rate = price" equation as its core pricing model, it is no wonder that pricing poses a challenge.

In recent industry surveys, pricing predictability and outcome predictability were highlighted as two critical value drivers for litigation counsel who believe that there remains substantial room for

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Behavior: Using Default Rules and Incentives to Change Behavior in Law Firms, 4 ST. MARY'S J. LEGAL MAL. & ETHICS 42, 86 (2014).

69. Pricing (in)accuracy has a myriad of knock-on effects that affect business operations and performance. Does the price estimate fall within industry norms and reflect a realistic budget? Will the client balk at the quoted price? Will other corporate strategic initiatives have to be postponed if there are cost overruns? Is the firm's target realization rate attainable?

70. This number results from extrapolating the recently published average net realization rate (83.0%) across the entire industry, both BigLaw and the remaining 70–80% of the industry. Assuming a 17.0% unrealized number, $60 billion is the delta between the dollar value of the hours recorded in law firm billing systems and dollars actually paid by clients after write-downs, write-offs and uncollected dollars. *See generally* CTR. FOR THE STUDY OF THE LEGAL PROFESSION AT THE GEORGETOWN UNIV. LAW CTR. ET AL., 2018 REPORT ON THE STATE OF THE LEGAL MARKET (2018), http://www.legalexecutiveinstitute.com/wp-content/uploads/2018/01/2018-Report-on-the-State-of-the-Legal-Market.pdf [https://perma.cc/8A29-6QFL].

71. Innovative technologies and data analytics tools have made aspects of practicing law more efficient over the past decade, significantly reducing the time it takes to analyze an issue or handle a discrete, routine task. Alternative service providers have entered the market, shaking up the hourly-rate side of the economic equation by offering competent, lower cost professionals and processes capable of handling high-volume legal work at a steep discount to major law firms. Amidst these innovations, law schools have been graduating law students at a pace that has created a supply/demand mismatch for legal services.

improvement on both counts.[72] Appropriate fee arrangements (AFAs), particularly fixed fees, and blended rates have been the most commonly used tactics, with mixed results.[73] Most AFAs are zero-sum-game propositions and aren't the long-term answer for an industry with competing economic pressures. Survey respondents indicated that *none* of their hundreds of law firms have proposed creative AFA structures despite clients' yearnings for more

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72.   *See* BLICKSTEIN GRP., FINDINGS FROM THE 10TH ANNUAL LAW DEPARTMENT OPERATIONS SURVEY 4 (2017), http://blicksteingroup.com/wp-content/uploads/2017/11/LDO-Survey-Supplement-2017.pdf [https://perma.cc/8TQH-T89E]; *see also* ASS'N OF CORP. COUNSEL, ACC CHIEF LEGAL OFFICERS 2017 SURVEY 4–6 (2017), https://www.acc.com/vl/public/Surveys/loader.cfm?csModule=security/getfile&pageid=1449472&page=/legalresources/resource.cfm&qstring=show=1449472&title=ACC%20Chief%20Legal%20Officers%202017%20Survey%20%20Executive%20Summary&recorded=1   [https://perma.cc/S74Z-6QLK] (explaining that compliance and regulatory changes will lead to chief legal officers "'focusing on decreasing cost and creating value'" and providing statistics suggesting that law departments are increasingly spending more of their budgets on litigation). The Executive Office of the United States Trustee has produced guidelines regarding the use of budgets in large Chapter 11 cases. Appendix B—Guidelines for Reviewing Applications for Compensation and Reimbursement of Expenses Filed Under United States Code by Attorneys in Larger Chapter 11 Cases, 78 Fed. Reg. 36,248, 36,249 (June 17, 2013). The Director of the Office of the United States Trustee explained the reason for requesting budgets in large Chapter 11 cases:

> In recent years, private industry has imposed major cost controls on outside counsel. Budgets, discounts, and other cost saving measures are required under many retention agreements. But in bankruptcy, budgets are rare and charging anything other than the full hourly fee often is considered unfair by the bankruptcy bar.
>   . . . .
> Moving to a slightly more controversial change: budgets should be submitted in cases meeting the $50 million threshold for both the debtor's attorney and the official committee's legal fees. While the budgets would not be binding and could be changed simply by submitting revisions, they would provide a benchmark and cause the applicant to explain any significant deviations from the budget targets.
>
> In most cases outside of bankruptcy, clients obtain a budget as part of the engagement process. With this Guideline change, budgets would become the norm in bankruptcy and they would be available for all parties to see. We understand that unanticipated litigation may lead to significant deviations, but we hope that budgets will bring greater discipline to the fee application process, help maintain the burden of proof with the applicant, and ensure greater client control and accountability.

Clifford J. White, III, Dir., Exec. Office for U.S. Tr., Notes for Remarks before the National Bankruptcy Conference (Nov. 10, 2011), at 4–6, *available at* https://www.justice.gov/sites/default/files/ust/legacy/2011/11/30/NBC_Annual_Meeting_111011.pdf [https://perma.cc/MZ9U-X6ZP].

73.   *See* Robin Snasdell, *Maturing to Take on New Challenges*, BLICKSTEIN GRP., *supra* note 72, at 6.

thoughtful pricing arrangements.[74] Forward-thinking legal industry leaders demand a systematic edge to price legal services accurately. Now, legal analytics tools can analyze billing data in a manner that allows for creative, reliable, and predictable pricing. These tools analyze, on a line-item-by-line-item basis, "who" (legal-professional credentials) did "what" (work elements identified in narrative) and "how long" it took. The data analytics tools then categorize that data in a manner that shows industry-specific pricing trends. Pricing legal services should be a data-driven strategic analysis, not a gut hunch. Why do we suggest that data-driven pricing works? Because one of us ran an experiment that led us to that conclusion.

D.   *Legal Decoder Inc.'s Pricing Pilot Program*

In late 2017, ten law firms and commercial clients partnered with Legal Decoder to use its LSA Pricing Engine legal analytics tool (the "Pricing Engine") to overcome pricing challenges.[75] The practical goal of the pilot program was to transform raw data into structured, actionable information for pricing and benchmarking.[76] In the pilot program, the Pricing Engine processed hundreds of thousands of line items from a vast array of legal matters.[77] The Pricing Engine analyzed billing data using its "bottom-up" approach, which pinpoints what a legal professional is doing from a narrative billing

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74.   *See id.*

  75.   Jason Chi & Joe Tiano, *Pricing Legal Services Accurately with Data Analytics Technology*, HIGH PERFORMANCE COUNS., https://highperformancecounsel.com/whitepaper_legaldecoder_pricing-legal-svcs/ [https://perma.cc/6D6W-2DFN] (last visited Feb. 4, 2019). Legal Decoder's Pricing Pilot Program was a commercial (as opposed to nonprofit/academic) endeavor that sought to explore and satisfy the legal analytics needs of larger players in the legal industry. The greatest need articulated by Pilot-Program participants was to categorize and standardize line-item billing data into a format that allowed for an apple-to-apples comparison of task billing and attorney efficiency. Some pilot participants tested Legal Decoder's output against their own manual processes and against other comparable technologies; other participants simply relied only on Legal Decoder's output when evaluating it as a legal analytics tool to address an organizational business needs. The biggest challenge identified was that most data, prior to Legal Decoder's analysis, was inadequately and inconsistently categorized. Pilot participants intend to use the output for pricing projections, performance evaluations, and talent resource allocation. *Id.*

  76.   *Id.*

  77.   *Id.*

entry (a "Work Element")[78] and then aggregates Work Element data into meaningful phases to build a pricing model (Figure 1 below).[79] The nature of the legal work and the duration of each task were automatically detected, calculated, and categorized, starting at the Work Element level.[80]
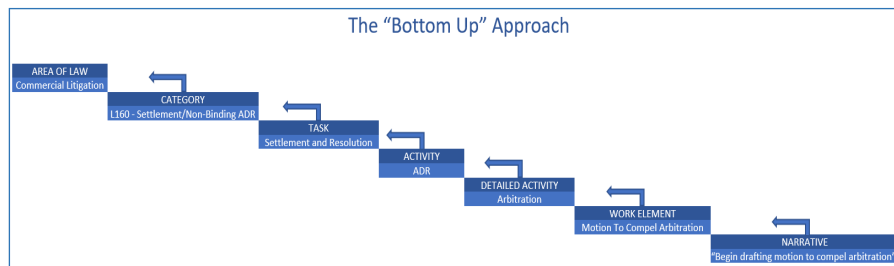

The "Bottom Up" Approach

AREA OF LAW
Commercial Litigation

CATEGORY
L160 - Settlement/Non-Binding ADR

TASK
Settlement and Resolution

ACTIVITY
ADR

DETAILED ACTIVITY
Arbitration

WORK ELEMENT
Motion To Compel Arbitration

NARRATIVE
"Begin drafting motion to compel arbitration"

Figure 1

The table below (Figure 2) provides just a few metrics and examples of the Pricing Engine's output, where a legal professional's time correlates to a Work Element.[81]

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78. Work Elements are very specific "legal" tasks worked on, handled, or produced by a legal professional (e.g., a motion in limine, an asset-purchase agreement, an expert deposition, due diligence reports, a FERC application, owner's affidavits, wills, court hearings, and so on). Some Work Elements may occur just once during a matter and others may recur. Although no cases, transactions, and matters are identical, every matter has hundreds or thousands of recurring Work Elements that make up its anatomy.

79. Once analyzed, the Work Element in a line-item narrative is automatically assigned by the Pricing Engine to one of a series of sub-branches and branches (Tasks, Activities, Detailed Activities) in one of Legal Decoder's proprietary taxonomies that cover many areas of law (e.g., M&A, Patent Litigation, IPOs, Commercial Litigation, Patent Prosecution, Internal Investigations, Employment Litigation and others) and, where applicable, align with Uniform Task Based Management System (UTBMS) codes. The UTBMS codes is a series of codes used to classify legal services performed by a legal vendor in an electronic invoice submission.

80. The LSA Pricing Engine doesn't require a legal professional to assign a code or to change workflow or billing habits. Historic data can be processed whether or not those data have been coded previously. The Pricing Engine also overcomes poor billing hygiene. Block billing, idioms, acronyms, and other billing-hygiene challenges pose no problem for the Pricing Engine. The Pricing Engine parses narratives and learns the lexicon and conventions that legal professionals use repetitively in narrative entries.

81. Chi & Tiano, *supra* note 75.

Work Element	Partner Hourly Average per Discrete Work Element	Partner Hourly Average per Recurring Work Elements (Matter Lifetime)	Average Partner Seniority (years)	Associate Hourly Average per Discrete Work Element	Associate Hourly Average per Recurring Work Elements (Matter Lifetime)	Average Associate Seniority (years)
Hearing Preparation	3.2	5.3	19	4.8	6.7	5
Hearing Attendance	4.3	13.6	21	4.0	10.7	5
Stockholder Agreement	4.7	8.4	14	4.4	7.0	4
Expert Reports	6.2	22.5	18	7.0	23.5	4
Depositions	7.4	34.2	21	7.2	28.1	5
Board Meeting	4.7	10.3	22	3.5	5.5	5
Board Presentation	3.9	7.8	23	3.6	5.2	4

Figure 2

After Work Elements in a matter were identified in the pilot program, the Pricing Engine helped to determine an appropriate division of labor, essentially answering the question of "who should do what?" when it comes to activities required for each Work Element.[82] Putting aside business activities required to run a law practice, the core activities in the practice of law are straightforward. Attorneys read, write, analyze, investigate, communicate, meet, advocate, negotiate, and manage a matter's progress.[83] Identifying

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82. *Id.*

83. Reading was the third most frequently occurring activity and equally spread among partners, associates, and paralegals at around a 15% rate of occurrence. Although reading ranks third in terms of frequency, it was the most time-consuming activity, particularly for associates—an unsurprising statistic because associates are heavily involved in document review and due diligence. Being able to evaluate data both in terms of frequency and hourly volume is critical to pricing precision and is easily handled by the Pricing Engine. Writing was the second most recurring activity overall in timekeeper line items and the most frequently recurring activity among associates. The critical takeaway from the data is that mid-level associates (3rd–6th years) should take the laboring oar when it comes to drafting something from scratch, because the data showed them to be the most efficient at this task. The data indicated that partners should be projected to spend, on average, approximately 17% of their time on drafting and revising documentation. Communication (telecommunications, email, and other written communications) occurred most frequently in all timekeepers' line items, showing up in nearly one-third

the individuals most suitable for each Work Element's activity is critical to pricing and is a key output of the Pricing Engine.[84] Based on the most appropriate division of labor, Work Elements were assigned to over 800 sub-branches, which rolled up to 120 branches within Legal Decoder's proprietary taxonomies and which were ultimately tagged with the proper UTBMS code number (or Legal Decoder equivalent). Not only can correctly categorized data help with pricing, but the data can also help with efficiency analysis and performance reviews.

When it comes to pricing, Legal Decoder's output allows a user to evaluate the average time per matter historically spent on specific Work Elements during the Document Production phase. For example, for a given type of case, the data shows that "Evaluation of Produced Materials," "Requests for Production, Objections & Responses," and "Review for Production" should take 22.8 hours, 21.9 hours, and 51.6 hours, respectively.[85] Machines are surely not the sole determinant of pricing, and legal analytics shouldn't blindly replace judgment and experience in pricing a legal engagement; however, machines can make pricing more precise and reliable. Legal Decoder's experiment provided a proof of concept: with the right benchmarks, it's easier to price an engagement and to make sure that the right professionals are doing the right tasks.[86]

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of time entries, with partners accounting for nearly 30% of communications activities. For pricing purposes, this data can be easily translated into actionable information. If, for instance, a fixed-fee billing arrangement is in place, a managing attorney should consider streamlining team communications using process-management techniques, enhanced-communication technologies, and highly structured meeting schedules. Insights of this nature improve cost-effectiveness and realization rates.

84. For instance, the Pricing Engine easily showed a division of labor for "document drafting" versus "document review and revision" versus "document negotiation." Even though countless legal professionals (especially seasoned associates and partners) can handle multiple aspects and activities associated with many Work Elements across several areas of law, the Price Engine pinpoints the ideal professional for the job, not just any capable body. This optimizes efficiency and resource allocation across every aspect of a matter while maximizing realization rates and profitability.

85. Nothing in the process, however, prevents a law firm from explaining to a client why a particular task took more time than the industry average would otherwise suggest.

86. Chi & Tiano, *supra* note 75.

IV.   Getting A Handle on Legal Spend

Any essay on topics as rarefied as legal spend, attorney behavior, legal analytics, and controlling legal fees wouldn't be complete without the obligatory list of "practice pointers" on how to get a handle on legal spend. Kidding aside, legal industry leaders will realize the greatest value for each dollar allocated to legal spend, both internally and externally, if the focus is not merely on the academic and theoretical aspects of legal analytics but on principles and actionable steps that can make a real economic and operational difference. Below are a few key takeaways on how to leverage legal analytics to get the best handle possible on legal spend.

Partner proactively with legal-process outsourcing companies (LPOs) for high volume, low risk/low value work. Low risk/low value work that has been handled by junior legal professionals can be easily identified by legal analytics tools that surface metrics around time, tasks, seniority level, and pricing. Does a $675-per-hour second-year BigLaw associate really need to "roll up the sleeves" on commercial lease review or a discovery "responsiveness" analysis? There are innumerable other examples of low-risk, low-value legal work that quickly increases a client's bill. Once law firms and clients identify the key metrics around low risk/low value legal work, they can redeploy that work to lower cost, highly competent LPOs and other alternative legal-services providers. After all, there's a reason that some work is assigned to contract attorneys and other specialists: they're more experienced at performing that work, and they're usually less expensive than BigLaw junior associates.[87]

Show non-attorney stakeholders how they benefit from a law firm's efficiency. Non-attorneys are often skeptical as to whether matters billed on an hourly basis are managed for optimal efficiency.

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87. Of course, the issue of how, then, a law firm can train its junior associates well (and profitably) is a whole other kettle of fish. Assigning repetitive work to junior associates used to be a time-honored way to train them for other, bigger assignments later. If clients don't want to pay for junior associates to get that training—in part because there are lower cost providers who can do at least as good of a job, if not a better job—will law firms find other ways to train their newest lawyers? We're more than a little worried that providing better pricing to clients will result in fewer training opportunities for associates.

Getting *value* from legal services is the proper objective, and the threshold measurement of value on a billable hour basis compares cost, efficiency levels, and outcome. Legal analytics allow legal professionals to self-monitor efficiency levels proactively and to fine-tune staffing and workflow to show stakeholders that, based on legal analytics, the law firm has delivered the optimal efficiency and *value*. Post-mortem matter analyses and annual outside counsel performance reviews are ideal opportunities for a legal analytics evaluation.

Educate colleagues that legal analytics is an investment, not a cost. Leveraging legal analytics will require an *investment* of time and resources for which both a client's legal department and a law firm will recognize a return on investment. For a client's legal department, the return on investment will manifest with improved quality and efficiency, strategic management of resources, and enhanced value from its legal spend. For law firms, efficiency levels will drive greater client attraction, retention, and satisfaction. Over time, legal analytics will translate to more business at higher profitability levels. Educating and building consensus around a legal analytics investment thesis is critical.

Consider carefully the issue of change management when introducing legal analytics. Although there is some truth to the adage that lawyers are averse to change, labeling the leaders of today's legal industry as entirely resistant to change and innovation or technophobic is unfair. Most people dislike change because it normally comes with by-products such as risk, uncertainty, a loss of control, more work, and more cost. Today's legal industry leaders are embracing change because the unwanted by-products of change are far less catastrophic than being change averse in a transforming, ultra-competitive legal industry. Overlaying legal analytics onto the practice of law certainly marks a change from the way law has been practiced for the past fifty years, but the shift need not be seismic. Steps toward adopting legal analytics can be incremental, and the careful messaging of how legal analytics improve results makes change more digestible.

Remind lawyers (and data analytics experts) that legal analytics will require a cross-disciplinary team and approach. In Part III, we noted that there is plenty of talent to assemble a top-flight legal analytics team, comprised of both lawyers and non-lawyers. The job of a lawyer seems to involve imagining every possible risk and then finding solutions to mitigate against every risk, however improbable. Lawyers have been trained with this mindset,[88] and it is partly what makes them so valuable. That said, from a legal analytics perspective, endless risk analysis promises to drive a data analytics expert over the edge. Although both lawyers and data analytics experts are analytical and process oriented, it is important for each side to understand the ethos of the other. Clear communication is key.

Pick the right practice areas to start with legal analytics. The practice of law can't be jammed into a formulaic process or managed solely with technology and statistics. Unexpected twists always pop up during deals; courts hand down unpredictable rulings; and regulators change policy views as new administrations take office. There are always variables. But certain areas of law are anatomically well-suited for legal analytics because they follow a normal, repeatable pattern of activities. Business-combination transactions, Chapter 11 bankruptcy cases, and patent litigation are areas in which the path can meander, but it usually continues to point in the same direction. If legal analytics are leveraged in the right practice areas, the chances of success increase exponentially.

Use the right data pool(s). Because of external forces that we've already highlighted, the practice of law has changed dramatically since the 2008 financial crisis. Leveraging $120 billion in legal spend data sounds powerful—almost irrefutably so; however, if 80% of the legal spend data is from the 1990s and early 2000s, insights from outdated data for 2018 and beyond are limited.[89] The dollar volume of data does not, by itself, translate to accurate insights when it

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88. You can blame law professors for this by-product of a legal education.
89. Chi & Tiano, *supra* note 75.

comes to driving pricing certainty. In fact, a greater volume of inapposite data skews results and often translates to the wrong answer. Selecting the right pool of current data is key to successful legal analytics.

Select legal analytics tools that align with how legal work should be performed. Legal analytics is a discipline that should not fall prey to Maslow's hammer.[90] The practice of law is complicated, and anyone that is embarking upon a legal analytics initiative should not view it as a cookie-cutter exercise. It's critical to employ a team and technologies that truly understand how lawyers should practice law. The value of a team of legal professionals is optimized when the lowest cost, *competent* legal professional handles a skill-set-appropriate task in the right amount of time (according to current industry benchmarks) without waste, redundancy, or friction in the workflow process. When law firms and clients use legal analytics tools surfacing the most important metrics, legal professionals should be able to understand and embrace the data and make fine-tuning adjustments that drive maximum value. If the use of legal analytics and the real-time fine-tuning help a law firm to attract or retain a big client, the investment of time and money will have been worth the effort.

Commit to take action. When analyzed thoughtfully, legal analytics data will inform both overall strategy and day-to-day tactics. There is nothing wrong with making strategic, data-driven changes that do not initially yield the desired result because tactical adjustments can be made later. There is everything wrong with seeing a data-driven path toward accomplishing a mission and taking no action to adapt to that path. An upfront commitment to take action is a prerequisite to success.

Monitor results. Almost invariably, the same legal analytics tools that surfaced mission-critical legal trends, insights, and key performance indicators will assess seamlessly whether the mission

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90. "I suppose it is tempting, if the only tool you have is a hammer, to treat everything as if it were a nail." ABRAHAM H. MASLOW, THE PSYCHOLOGY OF SCIENCE: A RECONNAISSANCE 15 (1966).

(the client's objective) is being accomplished, but it is equally critical to monitor whether the actions taken based on legal analytics-informed decisions are driving the desired results. Skeptical lawyers must be shown results from the legal analytics effort that are driving better results for both the client and its law firm.

CONCLUSION

Technology and data have leveled the playing field and demystified the practice of law in many respects. But Robot Law (the rise of the machine lawyer) is a myth. Technology just can't reproduce some aspects of what lawyers do, but it *will* augment how they practice. For example, software can't account for precedential value, from a *business* perspective,[91] of choosing one course of legal action as opposed to another. There are many areas in which legal services and advice should be delivered by lawyers alone, and not by technology, consultants, or alternative service providers. Technology has its limitations, and artificial intelligence won't replace lawyers. But it will improve their service, cost, and results. Lawyers who embrace technology and data analytics to augment their practice and inform their legal advice will have a competitive advantage.

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91. Software can find precedents but can't replace a good lawyer's judgment in how best to use those precedents.