SYMPOSIUM: DISRUPTIVE INNOVATION IN LAW AND TECHNOLOGY

Introduction
93 Or. L. Rev. 831

ARTICLES

Legal by Design: A New Paradigm for Handling Complexity in Banking Regulation and Elsewhere in Law
Paul Lippe, Daniel Martin Katz & Dan Jackson
93 Or. L. Rev. 833

The Industrial Age of Law: Operationalizing Legal Practice Through Process Improvement
Michael Callier & Achim Reeb
93 Or. L. Rev. 853

Finding Your Legal Niche
Dan Harris
93 Or. L. Rev. 881

The Future of Legal Education: Preparing Law Students to Be Great Lawyers
Peter S. Vogel
93 Or. L. Rev. 893

RETROSPECTIVE

Introduction
93 Or. L. Rev. 901

Legal Information Revolution! A Commentary on Computer Uses in Law Offices
Kelly C. Reynolds
93 Or. L. Rev. 903

Computer Uses in Legal Practice—Yesterday, Today, and Tomorrow
James C. Melamed, J.D.
93 Or. L. Rev. 913

COMMENT

Closing Thoughts: Fear and Loathing of Lost Wages—Experiences as a Law Student and Disruptive Legal Technologist
Alec Hankins
93 Or. L. Rev. 925
Symposium: Disruptive Innovation in Law and Technology

The landscape for lawyers is changing. Gone are the days when an attorney could hang up a shingle and count on a steady stream of clients; the ubiquity of online tools means that lawyers can no longer count on familiarity alone to guarantee client loyalty. What is an aspiring attorney to do in the face of these emerging phenomena?

The 2015 Oregon Law Review Symposium, “Disruptive Innovation in Law and Technology,” held April 24, 2015, in Portland, Oregon, offered a cornucopia of prescriptions. By bringing together a coterie of experts from around the country, the Symposium sought to answer a fundamental question: What are the skills lawyers will need to succeed in the face of rapid technological and structural change?

Dan Harris is a China-focused international business attorney and a founding member of Harris Moure international law firm. Harris discussed ways in which young lawyers could position themselves in today’s fluid and dynamic legal marketplace. Harris stressed the need to build a practice based not upon general legal practice areas but upon serving the legal needs of a particular type of client.

Peter Vogel, a partner at Gardere Wynne Sewell LLP in Dallas, discussed the importance of cyber security for lawyers. He noted that threats can come from a variety of angles, and that lawyers, as fiduciaries, must be the keepers of the flame. He also assessed tools that lawyers will need to succeed as our economy— and legal practice—becomes ever more digital.
Daniel Martin Katz, an associate professor at Michigan State University School of Law and chief strategy officer at LexPredict, brought the themes of the Symposium to a crescendo: marrying legal services with the emerging digital economy. Katz discussed ways in which legal services could be disrupted by nimble start-ups, and ways in which lawyers could leverage these incipient trends to serve unmet client needs and keep themselves gainfully employed.

Panelists at the Symposium included:

Kelly Reynolds, a law librarian at the University of Oregon School of Law, discussed the importance of exploiting new research tools to more effectively and efficiently address clients’ needs.

Achim Reeb, an aerospace engineer by training, and Michael Callier, a legal process strategist at Davis Wright Tremaine LLP, discussed how performance benchmarking—long relegated to manufacturing—can be used to better execute legal projects. They addressed ways in which law firms can adapt to change and incorporate best practices from other disciplines.

The Honorable Ann Aiken, Chief Judge of the District Court of Oregon, hosted the event at the U.S. District Courthouse. The panelists stressed that technology, when used properly and judiciously, can enhance the flow of information and reduce transaction costs.

Lawyers are now at a junction in which it is necessary to change how they practice law in order to stay relevant and effective. We organized this Symposium to answer a fundamental question: What are the skills lawyers will need to succeed in the face of rapid technological and structural change?

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Legal by Design: A New Paradigm for Handling Complexity in Banking Regulation and Elsewhere in Law

Introduction ................................................................................................. 834
I. The Rise of Legal Complexity ................................................................. 836
   A. RRP Groundwork ............................................................................. 836
   B. Complexity in Bank Regulation: Living Wills ................................ 838
II. Design Principles in Law ......................................................................... 843
   A. What Does “Design” Mean to the Legal Profession? .... 843
   B. Applying Design Principles in the Modern Regulatory Context .... 844
   C. Case Study: Design of an Integrated RRP Solution .......... 846
   D. The MOLA Approach ................................................................... 847
III. Technological Approaches to Legal Complexity: Machine Learning and IBM Watson ......................................................... 848
    A. The Nature of Information in Law and the Need for Human & Technology Ensembles ................................................. 849
    B. Legal Work Product as a Finance and Accounting Object .................................................................................................. 850
    C. Proposed Technology Development Trajectory ................. 851

* Paul Lippe is the chief executive officer of OnRamp Systems and former general counsel of Synopsys. Daniel Martin Katz is an associate professor of law at Michigan State University and chief strategy officer at LexPredict. Dan Jackson is the executive director of the NuLawLab at Northeastern University School of Law.
D. Challenges in the Proposed Technological Developments

Conclusion

INTRODUCTION

On August 5, 2014, the Federal Reserve Board (Fed) and the Federal Deposit Insurance Corporation (FDIC) criticized shortcomings in the Resolution Plans of the first Systemically Important Financial Institution (SIFI) filers.1 In his public statement, FDIC Vice Chairman Thomas M. Hoenig said, “[E]ach plan [submitted by the first eleven filers] is deficient and fails to convincingly demonstrate how, in failure, any one of these firms could overcome obstacles to entering bankruptcy without precipitating a financial crisis.”2

The first eleven SIFIs—Bank of America, Bank of New York Mellon, Barclays, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan Chase & Co., Morgan Stanley, State Street Corporation, and UBS—include some of the largest organizations in the world, with sophisticated internal and external teams of professional advisors. According to Jamie Dimon of JPMorgan Chase, in 2013, it took 500 professionals more than one million hours

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per year to produce their institution’s annual Resolution Plan. With regulatory pressure increasing, that number is likely to rise, or at least remain constant, across first-wave filers, and it suggests significant spending by all filers.

So why were the plans criticized despite heavy compliance investment? The Fed and the FDIC identified two common shortcomings across the first eleven SIFI filers:

(i) assumptions that the agencies regard as unrealistic or inadequately supported, such as assumptions about the likely behavior of customers, counterparties, investors, central clearing facilities, and regulators, and (ii) the failure to make, or even to identify, the kinds of changes in firm structure and practices that would be necessary to enhance the prospects for orderly resolution.

This regulatory response highlights, in part, the need for lawyers (and other advisors) to develop approaches that can better manage complexity, encompassing modern notions of design, use of technology, and management of complex systems.

In this Article, we will describe the information-mapping aspects of the resolution planning challenge as an exemplary Manhattan Project of law: a critical enterprise that will require and trigger the development of new tools and methods for lawyers to apply when handling complex problems without unsustainably swelling the workforce and wasting resources. Fortunately, a significant amount of the technology and process necessary to pursue this approach has already been developed by innovative Silicon Valley legal departments and applied by leading banks. Consistent with Dodd-Frank’s focus on reorganizing and simplifying banks, we will focus here on the information architecture issues which underlie much of what is changing about how law and legal work product is delivered, not just for resolution planning, but more broadly.

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4 Board & FDIC Press Release, supra note 1.

5 The Manhattan Project was the United States’ massive effort to develop an atomic bomb during World War II. See generally Manhattan Project, WIKIPEDIA, http://en.wikipedia.org/wiki/Manhattan_Project (last visited Mar. 27, 2015).

I
THE RISE OF LEGAL COMPLEXITY

A. RRP Groundwork

The resolution and recovery planning (RRP) challenge is emblematic of the exponential rise of legal complexity that has unfolded over recent centuries. Complexity in law is, in part, a response to the increasing complexity of social interactions and economic exchanges in society. According to Philip R. Wood, the “disproportionate increase in size and complexity of the legal regime makes the law inaccessible and therefore directly causes unwarranted legal risk.” Solving complex (but single instance) legal problems is the hallmark of bespoke legal work. Over the past decades, various institutions have confronted increasing legal complexity by assigning larger and larger numbers of highly paid human reasoners in an effort to meet new challenges. However, in many instances, the growth of legal complexity appears to be outpacing the scalability of an approach that relies exclusively or in substantial part on human experts and the ability of the client to absorb and act on the advice given. This complexity is particularly true in multiple and related matters, most notably those driven by technological innovation and connectivity.

As the size and complexity of tasks continues to grow, the economics of legal work are beginning to shift. It has become

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increasingly necessary to reconfigure legal work to treat technology as a “force multiplier,” as has happened in almost all other fields. In the legal services industry, we are beginning to see the rise of more legal technology companies and, to a lesser extent, law firms offering alternative business models. In civil litigation, for example, the sheer volume of information that must be reviewed during the discovery process has forced lawyers to leverage increasingly sophisticated forms of technology. In that context, as is the case in


13 Electronic discovery (e-discovery), probably the most mature application of technology in the legal industry, is following what may be a typical development cycle: in stage one, technology supported information management; in stage two, search; in stage
many other contexts, the gap between existing methods and ballooning imperatives has forced lawyers (and ultimately their clients) to search for alternative approaches to managing problems of large-scale and significant complexity.\footnote{Beyond the RRP challenge, there are a number of approaches being undertaken to help navigate complexity. In all cases, the question is to determine the optimal ensemble of people, process, and technology necessary to complete the respective task.}

\section*{B. Complexity in Bank Regulation: Living Wills}

The Dodd-Frank Act is a noteworthy example of regulation designed to respond to the complexity of modern industry. It is also an example of a regulatory approach that challenges the capacity of the legal profession to scale to the task. One requirement in Dodd-Frank—and in similar requirements around the world\footnote{James Titcomb, \textit{Banks Respond to Ring-Fence Plans}, TELEGRAPH (Jan. 3, 2015), https://uk.finance.yahoo.com/news/banks-respond-ring-fence-plans-201524291.html; Memorandum from Jay M. Goffman et al., Skadden, Dodd-Frank, FDIC and FSA Rules Require Financial Companies to Develop Global Insolvency Contingency Plans (Sept. 23, 2011), http://www.skadden.com/newsletters/Dodd-Frank_FDIC_and_FSA_Rules_Requ ire_Financial_Companies_to_Develop_Global_Insolvency_Contingency_Plans.pdf.}—is for “living wills,” by which all large banks (SIFIs) must develop a Resolution Plan, explaining how they could either be broken up or survive the failure of one part of the institution.\footnote{Jessica Silver-Greenberg & Nelson D. Schwartz, \textit{‘Living Wills’ for Too-Big-to-Fail Banks are Released}, N.Y. TIMES (July 3, 2012), http://www.nytimes.com/2012/07/04/business/living-wills-of-how-to-unwind-big-banks-are-released.html?_r=0; Noam Noked, \textit{Examining the Application of Title I of the Dodd-Frank Act}, HARVARD LAW SCH. FORUM ON CORPORATE GOVERNANCE AND FIN. REGULATION (May 15, 2013, 9:20 AM), http://blogs.law.harvard.edu/corpgov/2013/05/15/examining-the-application-of-title-i-of-the-dodd-frank-act/.} The living will is effectively a roadmap and simulation of the largest possible series of transactions in a bank’s lifetime, the type of analytical exercise that is common in electronic systems design or software testing, but unprecedented in law. Section 165(d) of Dodd-Frank, 12 U.S.C. § 5365(d), requires each nonbank financial company supervised by the Fed, and each bank holding company with assets of $50 billion or more, to report periodically to the Fed, the FDIC, and the Financial Stability Oversight Council, an interagency supervisory body created...
by Dodd-Frank.\textsuperscript{17} The report must include the company’s plan for rapid and orderly resolution in the event of material financial distress or failure and the nature and extent of credit exposures.\textsuperscript{18}

Section 165(d)(8) of Dodd-Frank requires the Fed and the FDIC to issue joint final rules implementing section 165(d) no later than January 21, 2012. The proposed rules were issued in April 2011,\textsuperscript{19} with comments due June 10, 2011. The final rules were published in November 2011.\textsuperscript{20} While the final rules essentially replicated the proposed versions, the agencies deferred finalizing the credit exposure reporting requirement in order to coordinate the development of these reports with “single counterparty credit exposure limit[s]” that were still under consideration.\textsuperscript{21} The required credit exposure reports would provide important information for risk management and planning processes by identifying the company’s significant credit exposures and other key information.\textsuperscript{22} The Fed proposed single counterparty credit limits for foreign banking organizations and foreign nonbank financial companies in December 2012.\textsuperscript{23}

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\footnotesize

\textsuperscript{18} Dodd-Frank Wall Street Reform and Consumer Protection Act § 115(d)(1)–(2).


\textsuperscript{22} Proposed rules governing, inter alia, single counterparty credit limits were proposed by the Federal Reserve in January 2012. See Enhanced Prudential Standards and Early Remediation Requirements for Covered Companies, 77 Fed. Reg. 594, 600 (proposed Jan. 5, 2012) (to be codified at 12 C.F.R. §§ 252.91–97).

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The final rules require a strategic analysis by the company of how it can be “resolved” under the Bankruptcy Code, chapter eleven of the United States Code (or an insolvency regime other than the Bankruptcy Code), in a way that would not pose systemic risk to the financial system. In doing so, the company must map its business lines to material legal entities and provide integrated analyses of its corporate structure; credit and other exposures; funding, capital, and cash flows; operations in domestic and foreign jurisdictions; and, significantly, supporting information systems for core business lines and critical operations.

With respect to the type of information that can be gathered from contracts to which a company is a party, the regulations require detailed reporting from a variety of perspectives, including:

Provide a detailed description of the processes the covered company employs for: (i) Determining the current market values and marketability of the core business lines, critical operations, and material asset holdings of the covered company; (ii) Assessing the feasibility of the covered company’s plans (including timeframes) for executing any sales, divestitures, restructurings, recapitalizations, or other similar actions contemplated in the covered company’s resolution plan; and (iii) Assessing the impact of any sales, divestitures, restructurings, recapitalizations, or other similar actions on the value, funding, and operations of the covered company, its material entities, critical operations and core business lines.

Each resolution plan shall: . . . (10) Identify the major counterparties of the covered company and describe the interconnections, interdependencies and relationships with such major counterparties; (11) Analyze whether the failure of each major counterparty would likely have an adverse impact on or result in the material financial distress or failure of the covered company; and, (12) Identify each trading, payment, clearing, or settlement system of which the covered company, directly or indirectly, is a member and on which the covered company conducts a material number or value amount of trades or transactions. Map membership

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25 12 C.F.R. §§ 243.4, 381.4 (2014); see Quinlivan, supra note 17.

26 12 C.F.R. § 243.4(c)(5).
in each such system to the covered company’s material entities, critical operations and core business lines.

To the extent not elsewhere provided, identify and map to the material entities the interconnections and interdependencies among the covered company and its material entities, and among the critical operations and core business lines of the covered company that, if disrupted, would materially affect the funding or operations of the covered company, its material entities, or its critical operations or core business lines. Such interconnections and interdependencies may include: (1) Common or shared personnel, facilities, or systems (including information technology platforms, management information systems, risk management systems, and accounting and recordkeeping systems); (2) Capital, funding, or liquidity arrangements; (3) Existing or contingent credit exposures; (4) Cross-guarantee arrangements, cross-collateral arrangements, cross-default provisions, and cross-affiliate netting agreements; (5) Risk transfers; and (6) Service level agreements.

These regulatory reporting requirements—and comparable requirements internationally—assumed that banks had much more comprehensive information about their operations than they in fact did. Consequently, RRP is leading banks to perform a comprehensive, detailed review of all contracts to which a covered company is a party with an eye to identifying, evaluating, and quantifying all material financial and operational risks arising out of those contracts. In essence, the regulations require a complete cataloguing of a covered company’s contracts along with a risk assessment for each contract that can then be mapped to the company’s operations and core business lines.29

27 Id. § 243.4(e).
28 Id. § 243.4(g).
29 As a result of their review of the 2012 Plan, the agencies have identified an initial set of significant Obstacles to Rapid and Orderly Resolution. Each obstacle should be discussed in its own section of the narrative. The obstacles are: (1) “[t]he risk that services provided by an affiliate or third party might be interrupted, or financial market utility (‘FMU’) access and/or payment and clearing capabilities might be lost;” (2) “an affiliate or third party might fail to perform service level agreements;” (3) “the Covered Company might experience interruption or loss of data and IT services;” (4) “liquidation of a counterparty might negatively impact the Covered Company’s operations;” (5) “cross-default provisions might be exercised;” and (6) “a counterparty might exercise contract rejection powers or might be excused from the continued provision of rights which are available to a counterparty under applicable law or by contract.” FED. DEPOSIT INS. CORP. & BD. OF GOVERNORS OF THE FED. RESERVE SYS., GUIDANCE FOR 2013 § 165(D) ANNUAL RESOLUTION PLAN SUBMISSIONS BY DOMESTIC COVERED COMPANIES THAT SUBMITTED INITIAL RESOLUTION PLANS IN 2012 §§ II.A.3-.4, II.B.2.d-e (n.d.), available
While many regulators, and perhaps even many senior executives, imagine that banks and other large institutions naturally have systems in place to manage this key legal information, experience suggests otherwise. One lesson of the financial crisis was that many risks were undetected for lack of systematized management of key legal information, and perhaps as importantly, potential disposition of assets was delayed. The Dodd-Frank Act seeks to protect national and international financial systems by identifying and mitigating these risks through structural information and remediation before institutional failure. Unlike regulatory regimes designed to control bank size, the living will regime aims to create a system in which large and highly financially networked banks can fail despite their size. In a world in which many politicians and regulators are moving toward more stringent size and capital limits on banks, the notion that it would take too much work for a given SIFI to understand and manage its own complexity is not a satisfying or credible explanation for an inadequate Resolution Plan. If anything, it would appear that regulators would continue to push SIFIs until better practices emerge and become widely adopted, setting the bar higher and higher.

at http://www.doddfrankupdate.com/Resource.ashx?sn=FDICFed2013ResolutionPlanGuidanceforCertainDomesti. The risk of counterparty actions, including derivative and repo unwinds, is of a volume sufficient to create operational challenges for the Covered Company or its FMUs and systemic market disruption or financial instability in the United States. The effects of these counterparty actions—both internally to the Covered Company and externally to counterparties and other affected parties—if the Material Entities were to enter resolution in a sequence other than that described in the previous subsection (e.g., increased complexity, cost, or delay client access to funds, failure occurring in middle of the week) are significant. Many arrangements would need to be made prior to the bankruptcy filing in order for the bankruptcy to proceed in a rapid and orderly fashion as provided in the Rule.


32 The initial plans will provide the foundation for developing more robust annual resolution plans over subsequent years. LIVING WILLS OVERVIEW, supra note 31, at 6.
II
DESIGN PRINCIPLES IN LAW

A. What Does “Design” Mean to the Legal Profession?

To fully understand the meaning we ascribe to “design” within this particular legal context, some basics are in order. As a verb, “design” connotes a process of creation. This may be how most lawyers not affiliated with traditional design professions have recently encountered the term; processes originally developed by, and for, product designers are increasingly used for innovation in other professions. These design methods include developing empathy through observation, cyclical iteration of ideas, prototyping, beta testing, and so on.

While this “design approach” to problem solving shows promise within the legal profession and legal education, we are here using the term “design” more formally as a noun. As such, “design” describes object creation, manifested by an agent, to accomplish a goal or goals, where the object satisfies a set of requirements, and its creation is subject to certain fixed constraints. Used in this traditional sense, the design “object” is a physical one, the agent is a human being (the designer), the goal is the purpose of the design exercise (move this large object from here to there), the set of requirements include material specifications (use only found objects), and the constraints are things such as available found materials (stone and wood). Thus, the first rudimentary wheel was not invented, but designed.

So, what exactly do we mean when we refer to design (as a noun) in the context of legal work, and specifically in the context of regulatory complexity such as that found in RRP? Used in this context, the objects to be created are the organizational changes

33 “To create, fashion, execute, or construct according to plan.” MERRIAM WEBSTER’S COLLEGIATE DICTIONARY 338 (11th ed. 2007).
34 See, e.g., TIM BROWN & BARRY KATZ, CHANGE BY DESIGN: HOW DESIGN THINKING TRANSFORMS ORGANIZATIONS AND INSPIRES INNOVATION (2009).
contemplated by the Resolution Plan and the information needed to inform them, the goal is to "convincingly demonstrate how, in failure, [a SIFI] could overcome obstacles to entering bankruptcy without precipitating a financial crisis,"38 and the set of requirements, or specifications, detailed here in Part II.A. But what of the "certain fixed constraints" cabining the actual creation of the Resolution Plan? Here is where a successful Resolution Plan is an exercise in legal design: Using new technology and alternative approaches to organize legal information can expand the available options well beyond what are initially seen as fixed constraints.

B. Applying Design Principles in the Modern Regulatory Context

Sophisticated lawyers have long recognized the disconnect between the way they create and access legal work product (e.g., documents and arguments) and the demands of complex organizations for systematic integration of processes and information (e.g., systems and data). To address growing scale and complexity, large organizations now need to "map" contracts and other legal work product to meet commercial and regulatory requirements to integrate and link document information into databases and processes. If they remain isolated, contracts will be a source of operational risk, with inevitable points of failure and high costs.

38 Hoenig Statement, supra note 2.
RRP requires a renewed focus on the management of operations and systems, which are typically highly dependent on external suppliers. Formal written contracts define the operations and systems interactions. A typical SIFI may have 1000 suppliers and 10,000 contracts (with hundreds of thousands, if not millions, of total clauses contained therein). Each contract may relate to a different system, may have immaterial and material variances across the same supplier, may reflect a different template, may have originally been entered into by a different entity, may be subject to different national laws (and in some cases, written in different languages), may be stored or labeled in an inconsistent fashion, and may or may not be found in any of the SIFI's primary document repositories. To successfully develop a living will, the institution must both comprehensively capture and map this information and take concrete action based on the collected information (e.g., restructuring or amending). The numerous contracts that form the legal framework of major financial institutions—whether derivatives, commercial loans, or intangibles licenses—have outpaced twentieth century technology in scope and complexity, and they require new approaches.
C. Case Study: Design of an Integrated RRP Solution

One SIFI that is not in the first wave has approached RRP by applying design techniques developed by companies such as Cisco Systems and OnRamp Systems. An example of these design techniques is the “system flow” for contract analysis, which is further described below. We refer to this process as MOLA, or “Massive OnLine Legal Analysis.”

1. Capture or “grab” existing contracts. This process is carefully managed and problems may be escalated back to the appropriate customer team. The source documents are typically electronic image files (PDF or other formats) and may not be in a searchable format. Older documents may be poor quality image files, but they still must be reviewed.

2. Contracts are initially checked for completeness, a folder structure for the contract family is created, and documents are uploaded into the Contract Review Service (CRS). Data on the number of contracts, the number of contract families, escalations, and similar metrics are captured. Contract family data is uploaded in a “grab report” spreadsheet that is automatically read by CRS, which then pre-populates certain data points.

3. Contracts are converted into searchable PDF format and further checked for missing pages, documents, or other errors. Contracts are tagged to provide a “flow-down” from parent to child contracts. Data on processing rates is captured and displayed on CRS dashboards.

4. Reviews are initiated and completed. Questions and problems are resolved through a flag and escalation process. Two independent reviews are done for each contract. Data on throughput, review time, reviewer and question error rates, and more is captured online. Access to data is restricted to appropriate personnel.

5. Completed reviews are then checked concurrently by quality assurance. Errors are reported and comments are captured for reviewer discussion. Throughput, status, and error rate data is captured for analysis and feedback to the team.

39 Existing contracts include all contracts, such as intercompany services and risk management agreements, vendor agreements, financial instruments, and insurance and reinsurance agreements.
6. Multiple types of reports are generated. Management information reports identify contracts and responses according to predefined criteria. Online reports support “drill-down” to the specific page of a contract. Performance and trend data can be exported to Excel, .CSV, SQL, or another appropriate data-reporting format. “Raw” data can be exported to Excel, .CSV, SQL, or another appropriate data-reporting format. The report generator allows very specific criteria, date range, etc., to be specified for report output.

D. The MOLA Approach

The MOLA process is conceptually similar to processes that have been used for almost two decades to address and solve extremely large, complex mathematical and scientific problems. IBM developed one of the best organized efforts—the World Community Grid—to conduct massive and complex research in a variety of areas, including cancer research, clean air studies, AIDS investigations, and other health-related projects. As described on its website, the “World Community Grid brings together people from across the globe to benefit humanity by creating the world’s largest non-profit computing grid . . . by pooling surplus processing power from volunteers’ devices.”40 In other words, the World Community Grid uses the Internet’s capacity to link together literally millions of individual computers and other devices into one giant computing network. The system then manages that network by assigning to each individual computer only a very small piece of the much larger computing and analysis project, and it thereby becomes possible to solve exceedingly large, complex problems at a fraction of the cost that would be required if the problem was assigned to a single, large supercomputer.

As with the World Community Grid, MOLA breaks a large, data rich, and complex legal project into small pieces that can be assigned to individual attorneys for completion. Those small, individual solutions, when combined with thousands of other individual solutions, result in a cost-effective solution to the overarching larger project. In this way, the solution to the large legal project is built from the ground up using the results of thousands of small legal projects.

A critical feature of the MOLA process—making it particularly nimble and efficient in processing deep pools of data—is the array of quality control mechanisms. These devices are designed to reduce errors at the individual attorney level and to ensure consistency in analysis across the entire project. Errors or inconsistencies at the individual attorney level can, both individually and collectively, undermine the integrity of the overall analysis and solution. Quality control processes can include such things as careful selection of the individuals who work at the small legal project level, appropriate training and guidance for the individual attorneys, oversight mechanisms that can identify and correct errors, and feedback loops to those individual attorneys so that their work product improves over time.

III
TECHNOLOGICAL APPROACHES TO LEGAL COMPLEXITY: MACHINE LEARNING AND IBM WATSON

As part of his or her role in large institutions, one important value proposition offered by the elite twenty-first-century lawyer will be to participate in the development of systematic solutions to efficiently manage legal complexity and guide clients to informed decisions. As Mark Chandler, general counsel of Cisco, says, lawyers need to move from being “gatekeepers . . . to build gateways.”41 In the RRP context, for example, it is impossible to make realistic assumptions, or to identify and make necessary structural changes, without a systematic understanding of complex enterprise structures, and the internal and external interrelatedness that drives them.

Without harnessing available technologies, lawyers are ill-equipped to handle the complexity of the modern legal landscape. New technology has begun to overcome traditional obstacles to technological intervention in the legal field, such as language-driven information structure and isolated data sources. In much the same way that analytics affect other industries, pathbreaking developments in artificial intelligence may provide the very assistance that is needed to combat problems that feature a wide scope and high levels of complexity. Best known for its win against the two greatest champions in the history of the television show “Jeopardy,” IBM

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Watson and other related technologies are now being applied to problems in medicine, finance, and various other industries.

Although important questions remain about how technology can apply to law, technology presents a big opportunity for the legal industry. To support various efforts, including the application of IBM Watson and other related tools, it is important to cultivate the proper mix of substantive experts and those with expertise in legal informatics.

A. The Nature of Information in Law and the Need for Human & Technology Ensembles

While most legal information has some sort of structure, much of it is latent or not particularly useful. Historically, latency—or what might be called the open syntax of the law—has frustrated attempts to either fully or partially automate legal tasks. The most immediate use for this technology will be in helping large entities organize and harvest relevant information from existing legal work product (e.g., their large body of contractual agreements). Eventually such approaches could potentially benefit all entities regardless of size.

One distinct characteristic of IBM Watson (and other related technologies) is its ability to process large bodies of unstructured and semi-structured data and derive meaningful information therefrom. IBM Watson is particularly well-suited to problems involving Natural Language Processing (NLP) and is able to iteratively improve as it observes more information in its relevant domain. Legal projects such as contract review—that involve information identification and extraction—are particularly well positioned to benefit from these emerging technological tools in conjunction with human experts. With appropriate configuration, IBM Watson (and other related tools)


could help the problem of resolution and recovery, and it could yield substantial improvements in the efficiency and accuracy of underlying tasks by integrating with, rather than substituting for, lawyers.

In the RRP context, IBM Watson (and other related technologies) can enable:

- Greater lawyer efficiency,
- Lawyer training and work product checking,
- Ongoing training of IBM Watson by the lawyers, and
- Development of a methodology of “Sample and Simulate,” whereby a bank analyzes a subset of its relevant documents. The bank still trains Watson sufficiently on that subset so that it can very rapidly analyze the remaining documents as needed, or more quickly if regulators require comprehensive analysis.

B. Legal Work Product as a Finance and Accounting Object

Through contract, individuals and institutions memorialize their various rights, obligations, and potential liabilities. Across the set of all agreements to which an entity is a party (and third party), it is possible to describe the expected revenue or liability flowing from those agreements. External data can offer a contract-level characterization of the risk attendant to each revenue or liability stream. This is, of course, a finance and accounting question, but its formal expression is in contract. By abstracting the agreement review process for purposes of due diligence, the goal of the review process is to harvest substantively important legal information and memorialize that information somewhere else, such as on a balance sheet. Thus, for many problems, finance and accounting’s root origin is in contract (and other associated legal work product).

The Dodd-Frank Act requires that banks develop Resolution Plans to minimize systematic risks. Risk comes in a variety of forms, but in most cases, the set of all contracts describe the interactome—the whole set of interactions—within which overall risk is a function of each counterparty and each agreement. As the legal community applies tools that can map the vast complexity of these relationships, clients will be better prepared to tackle modern legal challenges, such as those posed by the Dodd-Frank Act.45

45 Noked, supra note 16.
C. Proposed Technology Development Trajectory

The goal of RRP analysis is to convert a contract into a pointable data object where the contract memorializes the set of rights and obligations that are attendant to that agreement. To attain this goal, institutions will need to:

1. Collect the set of all agreements held by a bank.
2. Identify each counterparty from those agreements (and third party where available).
3. Develop a model of counterparty risk which would include both an individual and systematic (ecosystem) component.
4. Determine the nature of resource (financial) flows attendant to each counterparty.
5. Convert each contract into a pointable data object, which allows its contents to be immediately memorialized in a balance sheet or other relevant IT system.
6. Offer the ability for key decision makers to query a system and run various scenarios in which some sort of aggregate or systematic risk could be the output.

D. Challenges in the Proposed Technological Developments

Although we believe the application of machine learning and natural language processing—as manifested in platforms such as IBM Watson and other related technologies—will likely improve the efficiency and accuracy of various legal tasks, we are acutely aware of the significant limits attendant to applying new technology to the challenging work that lawyers, accountants, and compliance officers undertake. The appropriate question is to determine what ensemble of humans and technology can most efficiently and accurately complete a given task. Certainly, this ensemble will require both humans and technology to work together, as neither alone is sufficient given the scale and complexity of the underlying task.

The review task is particularly important for banks and other financial institutions. Many institutions have a variety of nonstandardized legacy agreements and assumed agreements from institutional consolidation, particularly because of the recent financial

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crisis. The diversity of agreements requiring review makes the task even more challenging. Despite these and other challenges, we believe that the approach described herein can facilitate compliance, and more importantly, enable regulated banks to manage risks while successfully performing their vital economic functions.

The end product of this review should be the development of a truly digital, and then ultimately computational, contract whose relevant content can be pointed toward every other relevant financial and accounting system.47 Not only will this digitization represent a general improvement in the quality of their information systems that can then be used to improve and streamline myriad business practices such as revenue recognition, but it can also serve as the backbone for banks to develop rigorous Resolution Plans that regulators will accept. Namely, with such data pipes in place, it is possible to run a variety of scenarios to determine the plausible range of potential outcomes. This sort of a “wargame” should provide key decision makers with a playbook that can be used in times of crisis, such as major financial institutional failure.

CONCLUSION

The complexity of global commerce and legal systems will continue to grow. Unlike most fields, law has been slow to embrace the tools and processes of managing increasing complexity. As a result, legal work has too often failed to prevent “catastrophic failures” because lawyers have not sufficiently accounted for complexity, not to mention that costs have grown in ways that are prohibitive for most of the nominal goals of the legal system. With new technologies and approaches borrowed from other fields, including the possible application of IBM Watson, law has the opportunity to dramatically increase its ability to manage complexity. Dodd-Frank RRP work is likely to be the Manhattan Project for such advancement, requiring that lawyers update their methods in ways that reduce risk in the financial system and catalyze advances in legal work in other domains.

MICHAEL CALLIER & ACHIM REEB

The Industrial Age of Law: Operationalizing Legal Practice Through Process Improvement

Introduction ...................................................................................... 854
I. The Legal Industry at a Glance: The New Normal ............... 855
II. Legal Market Stratification: Process Is Where the Money Is ............................................................... 856
III. Separating from the Herd: The Need to Evolve ............... 858
   A. Innovation as Offense: Differentiation ....................... 860
   B. Innovation as Defense: Neutralization ....................... 862
   C. Innovation to Increase Productivity ....................... 863
IV. Managing Innovation in a Mature Market............................. 864
V. Defining Value: Reduction in Pure Non-Value-Adding Work ...................................................................................... 866
VI. The Operational Excellence Landscape: Legal Process Outsourcing, Legal Service Integration, and Process Improvement ...................................................................................... 868
   A. Legal Process Outsourcing ............................................. 868

*Michael is a business attorney with twelve years of legal experience both in private practice and in-house. He currently works for Am Law 200 law firm Davis Wright Tremaine LLP’s innovation team as a legal process strategist. Michael has a bachelor’s degree from the University of Oregon, where he was a scholar-athlete, a Juris Doctor from the University of Oregon School of Law, and he is in the process of completing a Master’s of Science in information management at the University of Washington with an emphasis on strategic information initiatives and risk management.

Achim is a management consultant with more than twenty years of experience guiding organizations in performance management and improvement. Achim has a Diplom-Ingenieur degree in aerospace engineering with a major in computer science from the University of Stuttgart in Germany. He has extensively studied performance management and improvement techniques for the past fifteen years and coached leaders and practitioners around the world for the past nine years.

[853]
INTRODUCTION

The need for law firms to evolve and innovate is well-known and much discussed. However, the term “innovation” has become a buzzword as firms struggle to implement innovation strategies. This Article not only advocates for law firm evolution through innovation, but promotes operational excellence as the optimum innovation strategy. In the legal industry, operational excellence can be divided into three categories: legal process outsourcing, legal service integration, and process improvement. Of the three categories, firms would benefit most from developing process improvement capabilities. This holds true for three reasons. First, in-house lawyers want more efficiency from their law firms, and process improvement emphasizes efficiency. Second, the legal industry has reached a point of maturity in which operational excellence, including process improvement, is a primary strategy to grow and compete. Third, there are decades of process improvement methods, models, tools, and best practices that law firms can leverage to build process improvement capabilities.

Any innovation initiative must begin with learning. This Article encourages the use of operational excellence innovation strategies by educating readers about DMAIC, a structured problem-solving framework that underlies modern process improvement techniques. DMAIC is a scientific problem-solving method that stands for Define,
I
THE LEGAL INDUSTRY AT A GLANCE: THE NEW NORMAL

The only constant is change.
— Heraclitus

Since the financial crisis and associated economic downturn beginning in about 2008, corporate law departments face increasing pressure to do more with less. In turn, law firms are constantly looking for new ways to improve efficiency, reduce costs to themselves and clients, provide clients with more value-added services, and differentiate from rival firms.

According to the International Legal Technology Association (ILTA), changing global dynamics will drive rapid and continuous change for law firms over the next decade. Global drivers have converged to create a perfect storm. Many analysts believe that we have pushed key systems up to, or beyond, critical thresholds resulting in the current conditions to which we must adapt. These drivers impact legal departments in a number of ways: first, by constraining in-house legal budgets, causing companies to insource

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1 See infra Part VI.
4 Id. at 16 (discussing global challenges that shape the way society makes decisions as identified by The Millennium Project, “a global future-watch initiative that draws on a network of contributors from over 80 countries,” and summarized in the following categories: economic, politics, and governance; socio-demographic; science and technology; and energy, environment, and sustainability).
more legal work and outsource less; second, by shifting the legal market, served by the Am Law 100 and 200, to a buyer’s market; and third, by giving in-house counsel leverage to drive down the cost of outside counsel legal fees.

Chief legal officers’ (CLOs) opinions reflect these changes and, like a thermometer, can be used to gauge the legal industry’s temperature (and, like a thermostat, turn up the heat and drive change). The Altman Weil 2014 Chief Legal Officer Survey captures CLO opinions on the state of the legal market. Of 186 survey respondents, one of the two methods CLOs most frequently used to control costs was direct fee reduction from outside law firms. Forty percent of CLOs shifted work in-house, 36% shifted work to lower priced firms, and 34% reduced the overall amount of work sent to outside counsel. Of all cost control efforts, CLOs reported the greatest cost reduction occurred from shifting work in-house. Further, 26% of respondents plan to decrease use of outside counsel in 2015, while only 14% plan to increase usage. This represents a seven-year decrease in CLOs’ use of outside counsel.

II
LEGAL MARKET STRATIFICATION: PROCESS IS WHERE THE MONEY IS

If there is any one secret of success, it lies in the ability to get the other person’s point of view and see things from that person’s angle as well as from your own.

— Henry Ford

Market pressures have caused CLOs to evolve into astute legal supply chain and legal process managers, effectively operationalizing

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5 Aric Press, Punching Above Their Weight, AM. LAW., June 2014, at 68, 70 (2014) (stating that the Am Law 100 and 200 earned gross revenues of $96.4 billion). The Am Law 100 and 200 represent the top-grossing 100 and 200 law firms in the United States. See Aric Press, The Super Rich Get Richer, AM. LAW., May 2014, at 130, 130 (2014) (discussing the Am Law 100 as the top one hundred grossing firms); Press, Punching Above Their Weight, supra note 5, at 68 (stating that the Am Law 200 includes firms ranked 101 to 200 on the list of the nation’s top-grossing firms).


7 Id. at v.
8 Id. at i.
9 Id.
10 Id.
11 Id. at ii.
12 See id.
corporate legal departments. To increase efficiencies, two-thirds of CLOs responding to the Altman Weil Survey increased their departments’ use of technology, more than 50% restructured their departments, and 45% took measures to optimize internal nonlawyer work. In addition to greater cost reductions, CLOs want more efficient project management and budget forecasting from their outside counsel. American Lawyer Magazine divides the $96.4 billion legal market into five service categories:

- Critical strategic work: a deal of a lifetime, a subpoena to the CEO;
- If you want us, you’ll pay our fees. The client needs a law firm’s imprimatur;
- Important [business] operations support that the client can’t manage in-house;
- Ordinary [business] operations support that the client can’t manage in-house; and
- Commodity work that is more efficient to outsource.

The top two premium-priced categories account for approximately $32 billion. All Am Law firms compete for this premium priced “bet-the-company” work. However, 60% of that work, or approximately $19 billion, goes to the 23 top-earning law firms. That leaves 177 firms to compete for the remaining $13 billion of premium work.

The last three tiers of operations and commodity work—such as company internal software, hardware, and professional service procurement agreements—make up two-thirds of the legal market, or

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13 See Katz, supra note 2, at 1441–45; see also Georgetown Law Ctr. for the Study of the Legal Profession, 2013 Report on the State of the Legal Market 13 (2013), available at http://www.law.georgetown.edu/continuing-legal-education/executive-education/upload/2013-report.pdf (“[A]ll of the critical decisions related to the structure and delivery of legal services—including judgments about scheduling, staffing, scope of work, level of effort, pricing, etc.—are now being made primarily by clients and not by their outside lawyers. This represents a fundamental shift in the relationship between lawyers and their clients.”).

14 Altman Weil, Inc., supra note 6, at ii.

15 Id. (Of those responding, 58% want “greater cost reduction,” 57% want “more efficient project management,” and 57% want “improved budget forecasting.”).

16 See Press, Punching Above Their Weight, supra note 5.

17 See Aric Press, A Chasm with Consequences, AM. LAW., June 2011, at 63, 64.

18 See id. (referring to the 2011 legal market served by the Am Law 100 and 200).

19 See id.

20 See id.
approximately $64 billion. Not only is this work subject to steadily intensifying price pressure, but, due to its somewhat repetitive, low-risk nature, service delivery for this work can be standardized and optimized, like an efficient factory production line.\textsuperscript{21} As such, and in conjunction with rising client expectations around value-added work plus cost and time pressures, the legal market has expressed both explicit and implicit need for operational excellence practices in law firm services delivery.\textsuperscript{22}

Going forward, firms wielding innovative, process-based service delivery models will have a competitive edge against competition. “In order to meaningfully compete at virtually every tier of the legal industry, firms need . . . to embrace process. . . . If one expands the relevant dimensions of competition, then \{law\} becomes \{law + tech + design + delivery\} where \{law\} is substantive legal expertise and \{tech + design + delivery\} are process.”\textsuperscript{23} As such, “process is where the money is.”\textsuperscript{24}

III
SEPARATING FROM THE HERD: THE NEED TO EVOLVE

It is not necessary to change. Survival is not mandatory.

— W. Edwards Deming

With regard to a changing value proposition on legal service delivery, 42% of CLOs like to work with law firms that offer innovative legal service delivery models, 9% actively seek out law firms that offer innovative approaches to service delivery, and only 4% of CLOs are satisfied with the traditional legal service delivery model.\textsuperscript{25} Despite desire for change in legal service delivery, CLOs lack confidence in law firms’ willingness to satisfy this desire. Over the last six years, when asked how serious they think law firms are about changing their service delivery model in order to add more value to clients, the average response by CLOs, on a scale of one to

\textsuperscript{21} For our purposes, “operationalization” means defining repeatable success measures for legal work through a systems view that tracks inputs, throughputs, and outputs. After operationalization, the work becomes subject to standardization, performance measurement, and process improvement. This is unlike bespoke legal solutions.

\textsuperscript{22} For purposes of this discussion, “operational excellence” means legal process outsourcing, legal service integration, and—the focal point of this Article—process improvement.

\textsuperscript{23} Katz, supra note 2, at 1452.

\textsuperscript{24} Id. at 1456.

\textsuperscript{25} ALTMAN WEIL, INC., supra note 6, at iii.
ten with ten being very confident, was three. In addition, CLOs gave a measly 6% vote of confidence to law firms’ long-term interest in or ability to change.

A few firms have taken the need to evolve seriously and developed capabilities to succeed and add value in a changing marketplace. In 2012, Davis Wright Tremaine LLP, for example, launched an in-house research and development initiative called De Novo (i.e., “starting anew”) led by the firm’s chief innovation officer, Jay Hull. The mission of De Novo is to deploy people, processes, and technology that help attorneys work more efficiently at a lower cost to clients and in ways that create greater value for clients. Additional innovators and early adopters of change include firms such as Seyfarth Shaw LLP (Seyfarth Shaw), with its focus on Lean Six Sigma principles, and Bryan Cave LLP, winner of ILTA’s 2014 Innovative Law Firm of the Year Award.

Change is necessary to survive and is marked by innovation, i.e., creating or applying a new method, idea, or product in order to adapt...
to a changing environment. The purpose of innovation is competitive advantage. Leading innovation strategists divide innovation outcomes into three primary components: innovation as offense (differentiation), innovation as defense (neutralization), and a focus on increasing productivity and reducing costs. The next Sections explore these three innovation outcomes.

A. Innovation as Offense: Differentiation

Innovation can distinguish one company from another, causing clients to choose between products or services based on value rather than price. Innovation for the purpose of gaining separation from the pack is a differentiation innovation strategy.

The economic argument in favor of innovation focuses on pricing power. Without innovation, offerings become more and more like each other. They commoditize. As they do so, customers are able to play off one vendor against the next to get a lower price. Over time, the market stabilizes at prices at or below cost, creating returns for investors below the cost of capital, causing investment to flee the marketplace. By contrast, when innovation is applied, offers become more and more differentiated from one another, leading to different ones becoming the preferred choice for different market segments, giving those vendors pricing power within those segments. In this scenario the market stabilizes at prices well above cost, creating returns above the cost of capital, attracting more investment into the marketplace.

Amongst the Am Law firms, legal competence, Ivy League degrees, and practice areas are not differentiators because all firms have them or can acquire them. As Dan Katz states in his article, The MIT School of Law? A Perspective on Legal Education in the 21st Century, law firms primarily compete on one dimension—substantive legal expertise. The concept of legal precedent discourages innovation in the application of substantive legal expertise, at least until, for example, the arrival of new regulatory law (e.g., the Dodd-Frank Act) or a groundbreaking judicial decision that creates new

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33 Id. at 5.
34 Katz, supra note 2, at 1452.
law. Even when new areas of law arise, such as cyber security and digital privacy, the Am Law firms quickly acquire professionals in those fields to maintain their full-service offerings.

Accordingly, to deploy a differentiation innovation strategy, firms must focus on factors other than substantive legal expertise. For example, in 1986, John Quinn created what has evolved into the biggest all-litigation firm in the nation. By breaking from the herd and claiming to be experts in litigation only, Quinn Emanuel Urquhart & Sullivan, LLP (Quinn Emanuel) became one of the most profitable firms in the Am Law 100. Adding to Quinn Emanuel’s success, and equally innovative, is that it does not represent financial institutions, which leaves it free to sue financial institutions in the large and profitable cases that continue to arise from the financial crisis of 2008. No firm has yet dared to follow Quinn Emanuel’s path of maintaining a pure litigation practice and, in doing so, penetrating the Am Law 100.

Similarly, in 2002, Orrick, Herrington & Sutcliffe LLP (Orrick) migrated its back office work to a low-cost “global operations center” in Wheeling, West Virginia. Although back office migration is not a new concept, Orrick was the first large, U.S.-based law firm to so thoroughly embrace the concept; Orrick grew from 70 professionals in 2002—mostly IT, accounting, and operations—to 300 employees—including 47 career associate attorneys—by 2013. A

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36 See, e.g., Moran v. Household Int’l, Inc., 500 A.2d 1346 (Del. 1985) (upholding the shareholders’ rights plan, a hostile takeover defensive mechanism that rose to prominence under the more familiar moniker: the “poison pill”). In the 1980s, a period defined by corporate raiders, the poison pill was an innovation by Martin Lipton of Wachtell, Lipton, Rosen & Katz. Two-thirds of public companies incorporated a poison pill provision into their bylaws by the early 2000s, and law school corporations courses included it in their curricula. See Susan Beck et al., The Top 50 Big Law Innovators of the Last 50 Years, AM. LAW., Aug. 2013, at 27, 42.
37 Id.
38 Id.
39 Id.
40 Id.
41 Id. at 28–29 (Similarly, King & Wood stands as the result of the first ever merger between U.S. and Chinese law firms. The intent of the merger was to effectively represent the increasing number of Chinese companies venturing abroad. Since 1993, most other leading Chinese law firms have not followed King & Wood’s strategy.).
42 Id. at 30.
43 Id.
few firms, like Wilmer Cutler Pickering Hale and Dorr LLP, as well as Pillsbury Winthrop Shaw Pittman LLP, have since followed suit but, on the whole, not many firms have tried.\textsuperscript{44} By reducing overhead and optimizing back office work, these firms are able to free up resources and increase profit margins, effectively bringing more capital to the table to compete. A differentiation strategy involves boldly going where no firm has gone before—and where no or few firms are willing or able to go.

\textit{B. Innovation as Defense: Neutralization}

In addition to differentiating from competitors, innovation can neutralize a competitor in order to minimize loss of market share.\textsuperscript{45} The goal of a neutralization innovation strategy is to eliminate competitor differentiation by either catching up to superior competitor performance or to a market standard that a company has thus far failed to reach. The innovation of car cup holders provides an interesting case study.

Before 1950, car manufacturers made little attempt to accommodate multitasking while driving, such as driving and drinking a beverage.\textsuperscript{46} As time progressed, the increasing popularity of drive-thrus and drive-ins improved cup holder usefulness.\textsuperscript{47} Chrysler changed the game in 1983 when it invented the minivan, further increasing public awareness of cup holder utility.\textsuperscript{48} Momentum for cup holders finally culminated with \textit{Liebeck v. McDonald’s Restaurants},\textsuperscript{49} in which seventy-nine-year-old Stella Liebeck sued McDonald’s restaurant for damages after spilling 180-degree coffee on her lap in a stationary car.\textsuperscript{50} The spill caused Ms. Liebeck third-degree burns, and the jury awarded her $2.7 million in

\textsuperscript{44} See \textit{id.}
\textsuperscript{45} See MOORE, supra note 32, at 6.
\textsuperscript{46} Sam Dean, \textit{The History of the Car Cup Holder}, BON APPÉTIT (Feb. 18, 2013, 11:00 AM), http://www.bonappetit.com/trends/article/the-history-of-the-car-cup-holder.
\textsuperscript{47} Id.
\textsuperscript{48} Id.
punitive damages, which was reduced to $640,000 on appeal. Since that time, cup holders have not only become customer requirements, but have become selection criteria for more than one-third of car buyers. At this point in the automobile industry’s evolution, the absence of cup holders can cause financial loss instead of the presence of cup holders causing financial growth. That is the essence of innovation as a defensive or neutralizing strategy—innovate to defuse a competitor, service, or product’s impact on your market position.

C. Innovation to Increase Productivity

A third goal of innovation is to improve productivity and reduce costs. In this sense, the innovator’s intent is not to affect market outcomes, like differentiating from competitors or neutralizing competitor differentiation, but to achieve desired market outcomes at a reduced cost. The remainder of this Article focuses on this strategy and its primary innovation type—operational excellence.

Normally, productivity improvement is designed primarily to reduce costs to companies and clients. In the legal industry, however, firms so rarely focus on productivity improvement, as opposed to substantive legal expertise, that operational excellence can both reduce costs and differentiate, as Seyfarth Shaw has done with Seyfarth Lean. In the not-too-distant future, due to market demand,
legal industry maturity, and the availability of knowledge, methods, models, and best practices, law firms will compete on operational excellence capabilities much the same way that car manufacturers compete on cup holders. In other words, law firms without operational excellence capabilities will lose market share.

Productivity improvement is also essential to differentiation and neutralization strategies because it frees necessary resources to engage in more value-added work. Geoffrey Moore aptly states:

"Productivity improvement is essential to evolutionary adaptation because it frees resources that other forms of innovation can use. It requires significant innovation focused largely on reengineering existing processes based on either a better understanding of their dynamics or a better set of tools. The focus is on resource reclamation to ensure that the project pays for itself, and this is normally accomplished by reducing budget and head count."

Accordingly, for law firms that choose to evolve, operational excellence capabilities are essential.

IV
MANAGING INNOVATION IN A MATURE MARKET

All markets mature, and the market for legal services is no exception. Moore divides market maturity into four stages: the Growth Stage, the Mature Stage, the Declining Stage, and the End of Life Stage. The Growth Stage is marked by double-digit growth rates and healthy profit margins. The Mature Stage is marked by flat growth and increasing commoditization. During the Declining Stage, companies experience increasing difficulty finding opportunities to innovate, and even market dominators have difficulty creating attractive returns. The End of Life Stage speaks for itself.

The legal industry is in the Mature Stage, as evidenced by flat financial performance and an increasing trend toward commoditization. In 2014, the Am Law 100 registered flat performance on profits per partner (PPP), up by just 0.2%, and

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56 MOORE, supra note 32, at 7.
57 Id. at 14, 18–20.
58 Id. at 18.
59 Id.
60 Id. at 19.
61 See id.
revenue per lawyer (RPL), down by 0.4%—two key performance indicators for law firms.\textsuperscript{62} Since 2008, RPL in the Am Law 100 beat the rate of inflation by only 0.005%, while average PPP beat inflation by 8%.\textsuperscript{63} This performance is far weaker than the previous four years in which, from 2004 to 2007, average RPL beat inflation by 5% and average PPP beat inflation by 24%.\textsuperscript{64} The Am Law 200\textsuperscript{65} experienced similarly flat performance. Although RPL grew by 2.5%, average PPP grew by only 0.7% (and only after the total number of Am Law 200 equity partners dropped by 30 lawyers).\textsuperscript{66}

Typically, when we hear the word *innovation*, it is being used in the context of its most dramatic form—disruptive innovation—like the invention of the light bulb. But disruptive innovation typically occurs during the Growth Stage (i.e., the very beginning) of a market category life cycle, and it creates a new market where none previously existed (e.g., smartphones). Innovation, however, lives across all stages of a market’s life cycle, appearing in different forms based on the market’s stage of maturity.\textsuperscript{67} During the Mature Stage, companies achieve growth not by category creation or expansion as the market is too saturated for that, but by increasing yield from current clients or by acquiring new clients from competitors.\textsuperscript{68} Accordingly,

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\textsuperscript{63} Id. at 132.
\textsuperscript{64} Id.
\textsuperscript{65} In this case, Am Law 200 means top-grossing firms ranked 101 to 200.
\textsuperscript{66} Press, *Punching Above Their Weight*, supra note 5, at 68.
\textsuperscript{67} For a thorough analysis of innovation types across the maturity life cycle, see MICHAEL TREACY & FRED WIERSEMA, *THE DISCIPLINE OF MARKET LEADERS: CHOOSE YOUR CUSTOMERS, NARROW YOUR FOCUS, DOMINATE YOUR MARKET* (1995); MOORE, supra note 32, at 58–72.
operational excellence is an optimal innovation zone for mature markets because it focuses on giving the client more value for less money. To do so and remain profitable, firms must focus on developing efficient processes centered around customer value.

V
DEFINING VALUE: REDUCTION IN PURE NON-VALUE-ADDING WORK

Price is what you pay. Value is what you get.
— Warren Buffet

Clients define value, and each client may define value differently. At its core, operational excellence is about delivering greater value to clients. When clients push for lower fees, they are making a statement about the value of legal services compared to the price of those services. It is not necessarily that clients want cheaper legal services; they just want more value for their money. Value means furthering the client’s purpose by generating output that is considered more valuable by the client than the inputs consumed in producing it. 69 For a legal service deliverable to satisfy the definition of value, each activity of which it is comprised must, for the most part, meet three criteria: (1) the client must be willing to pay full price for the activity, (2) the activity must be done right the first time, and (3) the activity must change the product or service in some meaningful way. 70 These are value-adding activities. Everything else is non-value adding (NVA) and should be minimized or eliminated. 71


71 NVA activities can be subdivided into two categories: Business Non-Value Added (BNVA) and Pure Non-Value Added (PNVA). BNVA activities do not add value to the client but are necessary. See Business Non Value Added, MANUFACTURING TERMS, http://www.manufacturingterms.com/Business-Non-Value-Added-(BNVA).html (last visited Mar. 31, 2015). Examples may include: docket scheduling, document management plans, and anything else that does not immediately appear valuable to a client. BNVA activities should be managed but not eliminated.

In contrast, PNVA activities are pure waste because they do not add value and are not actually necessary to conduct business. Cf. ECKES, supra note 70, at 50–53 (stating that subprocess mapping reveals inefficient, non-value-added steps that teams should attempt to change or remove); BEAU KEYTE & DREW A. LOCHER, THE COMPLETE LEAN ENTERPRISE: VALUE STREAM MAPPING FOR ADMINISTRATIVE AND OFFICE PROCESSES,
improvement, a category of operational excellence, is all about managing, minimizing, and eliminating NVA activities.\textsuperscript{72}

Many will agree that “[t]he only way lawyers can maintain or improve the quality of their work while minimizing the [cost] to their clients is to make operational improvements in how the work is done.”\textsuperscript{73} Operational improvements result from operational excellence. Lawyers who care about delivering and maintaining client value care as much about managing their processes as they do about accurate interpretation of substantive law. In fact, with the right process-based tools, even an inexperienced lawyer can perform above-average legal work.\textsuperscript{74}

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\textsuperscript{74} Id. at 7–8.
VI
THE OPERATIONAL EXCELLENCE LANDSCAPE: LEGAL PROCESS
OUTSOURCING, LEGAL SERVICE INTEGRATION, AND PROCESS
IMPROVEMENT

The operational excellence innovation type can be executed in
three ways: value engineering, integration, and process improvement.
For law firms, that can translate into legal process outsourcing (LPO),
legal service integration, and process improvement. This Part briefly
describes the operational excellence landscape, and the remainder of
the Article focuses on process improvement and the DMAIC
problem-solving framework.

A. Legal Process Outsourcing

LPO means outsourcing legal work to lower cost legal
professionals without reducing quality. To deploy this method
effectively requires scalability and good project management. For law
firms, this could mean outsourcing standardizable, junior associate
legal work to low-cost onshore or offshore service providers.75 It may
also include outsourcing specialized legal work to legal analytics
experts, like the “law machine,” Lex Machina, or Katz with
Computational Legal Studies.76

B. Legal Service Integration

Legal service integration means taking a number of disparate or
complex elements and integrating them into a single, manageable
system.77 In practical terms, integration provides a management layer
that will take care of all the details while keeping things consistent
with the system as a whole. Integration work can serve to bring the
complexity of target legal issues under the singular management of
one firm. For integration to succeed, it must: (1) shield the client from
complexity, (2) deploy at relatively low cost, (3) generate ongoing
cost savings, and (4) lead to future enhancements.

75 Radiant Law, a U.K. firm, follows this model. See Alex Hamilton & Kevin
Colangelo, Making LPO Work, OUTSOURCE MAG. (July 3, 2012), http://outsource
magazine.co.uk/making-lpo-work/.
76 See Tam Harbert, Supercharging Patent Lawyers with AI, IEEE SPECTRUM (Oct. 30,
2013, 2:00 PM), http://spectrum.ieee.org/geek-life/profiles/supercharging-patent-lawyers
-with-ai; see also COMPUTATIONAL LEGAL STUDIES, http://computationallegalstudies
.com/ (last visited Feb. 25, 2015).
77 See Harbert, supra note 76.
C. Legal Process Improvement

Legal process improvement is about reducing cost to the client and improving profit margins to the firm. Legal process improvement is achieved by managing and eliminating NVA activities from all of the enabling processes that create, deliver, and support a product or service and by eliminating error or defects. Seyfarth Shaw was an early adopter of legal process improvement. On the path to increased efficiency, typically referred to as a “lean journey,” Seyfarth Shaw, like many organizations that emphasize process improvement, leveraged the DMAIC roadmap to guide its process improvement projects.

VII

DMAIC: THE ROADMAP FOR PROCESS IMPROVEMENT SUCCESS

A journey of one thousand miles begins with a single step.
— Lao Tsu

All travelers embarking on a journey into unfamiliar territory would be wise to follow a map to ensure they arrive at their intended destination. The map is not the territory itself, but simply an explanation of certain aspects of the territory. But imagine that you wanted to drive from Chicago to New Orleans, but you had no map. You might reach New Orleans, but you probably would not have taken the most efficient route. Now imagine that you had the wrong map. You would eventually arrive somewhere, but it is unlikely that “somewhere” would be your intended destination.

DMAIC is a prominent process improvement map or framework that accompanies the Lean and Six Sigma Bodies of Knowledge. Recall that DMAIC is an acronym that stands for Define, Measure, Analyze, Improve, and Control; each letter represents a different phase of a process improvement project. Each phase calls for different emphasis, different activities, and different tools. For law firms, the journey toward process improvement should begin with a strong understanding of the DMAIC framework.

78 The term “waste” includes: errors, unnecessary production, unnecessary waiting, and over-processing.
79 Schmidt, supra note 55.
A. Origins of DMAIC

DMAIC was originally inspired by W. Edwards Deming’s Plan-Do-Check-Act Cycle and formalized by Motorola in the 1980s as the framework for the process improvement methodology, Six Sigma. Six Sigma was developed to improve quality and organizational performance by systematically identifying sources of variation, in both manufacturing and support function processes, and to drive variation out of the process. The Sigma level of a process is a universal metric that describes the amount of variation a process can exhibit and still meet client needs. Jack Welch popularized Six Sigma when he made it a central element of General Electric’s strategy. The application of the DMAIC framework to thousands of problems across many manufacturing and service industries has caused it to evolve significantly into a generic problem-solving framework that has been integrated into additional Bodies of Knowledge such as Lean.

B. Utility of DMAIC

DMAIC encourages practitioners to gain clarity about the nature of problems and their causes prior to implementing solutions. By doing so, the framework counteracts the temptation to “over manage” a process and react to individual data points of lagging performance metrics. Such over-management actually decreases performance despite the best of intentions. The DMAIC framework is driven by data (i.e., performance metrics, such as number of incomplete or inaccurate process deliverables, number of billing mistakes, days of billing delays, resources consumed by a process, etc.) and is most useful where such data is easily accessible. Where no reliable information about the performance of a business is available, process improvement projects take longer because practitioners have to put

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80 ECKES, supra note 70, at 2–5 (Six Sigma is a statistical term that refers to the number of defective products manufactured per million products.).
81 Id. at 5–7; see also MIKEL J. HARRY, THE NATURE OF SIX SIGMA QUALITY (1997).
82 ECKES, supra note 70, at 4–6.
83 Id. at 8–9, 13.
84 Lean and Six Sigma complement each other. Lean reduces complexity, eliminates pure NVA activities, and improves cycle times; Six Sigma emphasizes client value, is data driven, and creates an environment to manage and sustain results. Lean Six Sigma incorporates both Lean and Six Sigma principles. According to some process improvement experts, when used together, Lean and Six Sigma “can solve 90 percent of the problems faced by organizations today.” Lann Wasson, Lean Six Sigma: Mastering the Art of Service Delivery, ILTA WHITE PAPER, Mar. 2010, at 24, 27–28.
the necessary measurement systems in place prior to improving performance. Such a circumstance indicates that an organization is not yet ready for systemic, enterprise-wide performance improvement. In our experience, this obstacle is particularly prevalent in law firms. Fortunately, Lean and Six Sigma include qualitative tools that help identify performance indicators and performance problems that allow practitioners to build data collection mechanisms into relevant processes in which no such processes previously existed.

More important than the availability of data is the availability of “accurate” data for process improvement project success. Often the analysis finds that one of the key contributors of poor process outputs is poor process inputs. In other words, “garbage in, garbage out.” Insufficient information about a business leads to poor contract formation, incorrect routing information leads to rejected wire transfers, and insufficient training of process owners leads to poor performance. Hence, the execution of process improvement projects, more often than not, leads to the need to transcend organizational boundaries and address problems at their root, even if the root is to be found in an altogether different process or department. Therefore, widespread buy-in and support from senior leaders in the organization is critical to the success of DMAIC projects. This is one of the reasons that General Electric’s Six Sigma deployment, until today, is one of the most successful deployments in history, as it was driven from the very top by Jack Welch.

C. Five Phases of DMAIC

The phases of the DMAIC framework are designed to achieve and demonstrate sustainable improvements by following the roadmap below:

- Define the problem for resolution by identifying the process that exhibits the problem, the pain this problem inflicts on the business and clients, and a baseline and desired target performance.

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85 In other words, if I am continuously late on billing my clients but I do not know how late I am, how often I am late, the dollar amount of the outstanding receivables, or where the lateness originates from, regardless of my efforts, I will never be able to conclude that I have improved the situation sustainably.

86 Senior organization leaders who pave the way and provide top-down support for process improvement projects are called “Project Sponsors” or “Project Champions.”
• Create the ability to measure the problem as well as factors suspected to be causing the problem.
• Analyze the possible causes of the problem to determine which causes are the key contributors.
• Improve the process by eliminating the key contributors and making changes to the process, the tools used in the process, and the resources or skill sets deployed in the process. Ideally, this approach will make recurrence of the cause impossible rather than gradually testing the problem out of the process through quality control and NVA review steps. This is called “building quality into the process.”
• Control the process going forward such that process owners recognize when the causes of the problem return.87

The control phase is particularly important in process improvement because it encourages building process improvement principles into daily routines. The control phase advocates changing the way process owners look at and react to performance metrics, with an eye toward continuous improvement. To foster continuous improvement, daily process management ultimately draws to the surface information needed to trigger new improvement efforts. This is why leadership must fully engage in process improvement deployment. The best-executed improvement efforts may not lead to sustained improvement if leadership and management counteract improvements achieved through contrary daily management and decision making.

D. Applying the DMAIC Framework

Quality, cost, and time are the fundamental performance dimensions the DMAIC framework aims to improve. Whether applying the Lean or Six Sigma Body of Knowledge, DMAIC is most commonly applied to improve and manage processes that produce a distinct output. Document production, interrogatories, disclosures, and briefs, as well as billing invoices and docket schedules, are all examples of distinct process outputs. DMAIC is typically targeted toward the output failing to meet internal or external client

requirements and expectations (quality), delays in production (time), or excessive cost in generating the outputs (cost).\textsuperscript{88}

Regardless of the performance dimension, application of DMAIC is always a learning process that applies Lean or Six Sigma tools to incrementally generate more knowledge about the target process’s behavior. During the stages described by DMAIC, the practitioner seeks to:

- Define: What is the performance problem, how big is it, and what is the process that generates the problem?
- Measure: How does the process behave over time, and are there any applicable segmentation factors?
- Analyze: Why does the process behave this way, and what parameters and settings make it behave this way?
- Improve: Does the process behavior change if we implement certain changes?
- Control: How can we maintain the desired process behavior by monitoring and managing the right leading performance metrics?

Application of DMAIC ultimately drives practitioners to understand interactions between process parameters. Interaction between process parameters is like interaction between different medications taken concurrently—two lifesaving medications can be deadly when taken in combination. Accordingly, process parameters can interact with each other and lead to undesired results. Each phase of DMAIC drives a greater level of understanding about these interactions. During the measure phase, practitioners develop knowledge about the factors impacting process performance. During the analyze phase, practitioners seek to understand whether and how such factors interact with each other and to prevent unexpected effects of changes implemented during the improve phase.

\textit{E. Tools of the Trade}

Process improvement practitioners bring an arsenal of tools to a project that enables them to analyze the relationship between the parameters driving the process and the performance dimension they

\textsuperscript{88} See \textsc{Eckes}, \textit{supra} note 70, at 29–65; see also \textsc{Michelle Fujimoto \& Eric D. Brown}, \textsc{Lean Six Sigma: What You Don’t Know Can Hurt You}, available at http://www.iadcmmeetings.mobi/assets/1/7/15.1_-_fujimoto-_six_sigma.pdf; \textsc{Thomas Pyzdek}, \textsc{The Six Sigma Project Planner: A Step-By-Step Guide To Leading A Six Sigma Project Through DMAIC} 95–164 (2003).
seek to improve. Not every tool is necessary for every project. In fact, law firms do not need an army of statisticians to make process improvement work. “‘Ordinary people’ [including lawyers] can be trained to conduct Six Sigma projects successfully.”

In a 2009 survey of Lean Six Sigma practitioners, Michael Marx discovered that in actual practice, the only tools that process improvement practitioners use on every project are process maps, project charters, and brainstorming. A few more tools are considered tools of choice: Pareto charts (identifying which twenty percent of factors are causing eighty percent of process defects), Five Whys (a root cause analysis exercise), basic statistics, and graphical charts. In service industries, such as legal practice, practitioners also use specific tools to enhance client empathy and define quality and value from the client’s perspective. These tools are Voice of the Customer (an analysis of client survey results), Stakeholder Analysis (analysis of primary parties impacted by the process), and SIPOC maps (a tool that identifies a process’s suppliers, inputs, process steps, outputs, and internal/external clients).

We take the position that any lawyer who is supported by a system of tools that automates tasks, or otherwise assists the lawyer, can have an above-average capacity for legal work. Logically, a lawyer of above-average skill, supported by the same tools, would have a superior capacity for legal work.

F. Overcoming Challenges to Adopting Process Improvement Initiatives

Changing behavior is not a simple task. Law firms pursuing enterprise-wide process improvement implementation should do so strategically, with an eye toward what challenges to expect and how to overcome those challenges.

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89 Wasson, supra note 84, at 28 (quoting Ronald Snee). Snee is a leading Lean Six Sigma practitioner and former DuPont professional. See id. at 25.

90 Id. at 28. This article cites other useful sources. See, e.g., Michael Marx, Lean: Benefits and Challenges, iSixSigma MAG., Sept./Oct. 2009; GEORGE ET AL., supra note 87.

91 Wasson, supra note 84, at 28.

92 Id.

93 MURDOCK & HYER, supra note 73, at 7–8.
1. Challenge #1: Applying a Manufacturing Framework to a Nonmanufacturing Environment

Though DMAIC has demonstrated success in many industries and business areas, the legal industry has maintained a greater resistance to improvement than others.94 We typically observe that owners of processes that do not generate tangible deliverables—like some legal processes—demonstrate significant resistance to process improvement and require experienced practitioners to demonstrate the value of the systematic DMAIC approach. Examples include the R&D process or other processes that generate knowledge as their primary output. Once resisters recognize that knowledge can be treated as a tangible output, they can adopt and apply process improvement principles in their entirety. In that context, activities that do not increase the knowledge about a product, process, or client would henceforth be defined as a form of NVA and managed or eliminated accordingly.

For example, developing a product typically requires qualification tests that demonstrate the product works. A failed test requires a rework of the product’s design or manufacturing process. Traditional lean concepts would consider such tests NVA, as they do not change the form or function of the product and failed tests that require a rework would be a form of waste. With knowledge being the prime deliverable of the process, however, the experiment generating the least expected result has generated the maximum amount of information. Thus, a test the product passes is the test that did not add as much value because it generated an expected result and was purely confirmatory. Conversely, when conducting legal research to determine whether any case, statute, or regulation would render a particular litigation strategy vulnerable to attack turns up empty, the research adds value because the resulting knowledge supports the strategy for which the client has paid.

2. Challenge #2: Fear of Change or Obsolescence

The difficulties in applying process improvement concepts are the same in the manufacturing industry as they are in all other industries, including legal. What is generically labeled as a “fear of change” is actually much more deeply rooted in a fear of being reduced,
diminished, commoditized, and made replaceable or redundant.95 Such fears are commonplace where any change occurs.

A common defense to the threat of change is the declaration that one’s service is not a process and neither measurable nor manageable, but that it depends on education, experience, relationships, or intuition.96 The best way to deal with such fears is to engage the affected parties in the change process, provide incentives for supporting the new process, and provide pathways for all affected parties to benefit from both the improvement journey and the outcomes. Education and skills training play an important role in this transition. Equally important is the recognition that cost reduction and efficiency improvement are only one side of the business equation, while new market opportunities, product and service offerings, and increased customer satisfaction are growth opportunities that require increased efficiencies to be harvested in an increasingly competitive marketplace.97

3. Challenge #3: Environment

Where there is no measure for the outcome or result of a process, neither DMAIC nor any other process improvement framework can yield verifiable improvements. “We don’t need measures, we will know when it gets better” is an environment in which many improvement activities may be conducted, none of which will be able to verify that anything has actually improved. As Chris Argyris points out in Teaching Smart People How to Learn, “[p]rofessionals embody the learning dilemma: they are enthusiastic about continuous improvement—and often the biggest obstacle to its success.”98 Because professionals are almost always successful at what they do, they rarely experience failure. “[B]ecause they have rarely failed, they

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95 As Moore states:

One place where many companies need to improve is in repurposing the resources that are freed up. Too often management resorts to layoffs and write-offs, disrupting both the workforce and the hosting social environment and sowing seeds of distrust and misalignment. This is a highly expensive and inefficient approach, and finding sounder alternatives is key to sustaining innovative performance.

MOORE, supra note 32, at 7.


97 For more on fear and change, see JOHN P. KOTTER, LEADING CHANGE (1996).

have never learned how to learn from failure. So whenever their strategies go wrong, they become defensive, screen out criticism, and put the blame on anyone but themselves. In short, their ability to learn shuts down precisely at the moment they need it the most.

Learning from failure is a key element of any improvement framework. At Toyota, not only do workers pull the andon cord to notify their superiors of a problem in the car assembly, management gets particularly concerned when the andon cord is not pulled often enough. The frequency of andon pulls is a metric for the pace at which they identify problems and develop solutions, i.e., improve the process. Similarly, improvement projects start by identifying and describing a problem and its magnitude, rather than by proposing the solution to fix the problem. Traditionally, lawyers are not trained or rewarded for surfacing problems in their own processes. Lawyers pride themselves on knowing the solutions, and it is a zero-sum game. This perspective is embedded in typical law firm culture for both lawyers and non-lawyers alike.

Argyris coined the term “double-loop learning” and recommends productive reasoning to tackle such challenges in professional environments. At the same time, he leaves no doubt that an environment for success must embrace a new attitude toward the concept of failure that transcends the entire organization, including the standards upon which professional performance evaluations are based.

Toyota’s leadership has embraced the fact that when a worker makes a mistake, his superior is primarily to blame for failing to provide the tools, conditions, and skills required to perform the job.

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99 Id. at 100.
100 Id.
101 Id.
103 See LIKER, supra note 102.
flawlessly. As Deming’s 85/15 Rule states, 85% of the problem in any organization is system-related and 15% is worker-related.105 “Until senior managers become aware of how they reason defensively . . . [a]ny change activity is likely to be just a fad.”106 This is why any successful improvement program starts with educating leadership.

VIII
THE NEED FOR INDEPENDENT THOUGHT

If you only have a hammer, you tend to see every problem as a nail.
— Abraham Maslow

A word of caution: DMAIC is not a one-size-fits-all prescription for process improvement success. Not every problem will be solved by simply following the DMAIC steps. Often in the measure and analyze phases, practitioners split projects into different tracks. No-brainer improvements follow DIC107 or DMIC.108 Other projects might follow a DMDMAIC109 track. It is the situation at hand and the practitioner’s experience that determine the right route. Just like IRAC110 and CREAC111 provide structure to legal argumentation while simultaneously instructing legal writers where to focus their efforts, DMAIC shapes the process improvement project structure. Frameworks are not substitutes for ingenuity and creativity; they are tools designed to augment such attributes. Accordingly, DMAIC, like IRAC, is not a Bible or a cookie-cutter process; it is a framework and cannot substitute for good analysis, teamwork, and a willingness to learn (and sometimes fail).


106 Argyris, Teaching Smart People How to Learn, supra note 98, at 106.

107 Define, Improve, and Control.

108 Define, Measure, Improve, and Control.

109 Define, Measure, Define, Measure, Analyze, Improve, and Control.

110 Issue, Rule, Application, and Conclusion.

111 Conclusion, Rule, Explanation, Application, and Conclusion.
CONCLUSION
LEARNING TO SURVIVE

An investment in knowledge pays the best interest.
— Benjamin Franklin

Innovation begins with learning. Learning organizations evolve and thrive through innovation, while other companies perish. Process improvement is an optimum innovation strategy for any law firm that chooses to adapt to mature and changing legal markets. DMAIC is a process improvement building block that can help to achieve greater efficiencies, reduced costs, and greater value to clients.

Regardless of the innovation strategy that law firms choose to adopt, innovation is necessary, although survival is not. We, however, encourage law firms to adopt operational excellence innovation strategies and prescribe to process improvement.
Finding Your Legal Niche

Introduction ...................................................................................... 881
I.  Three Keys to Future Success ............................................... 882
   A. Marketing Is Imperative ................................................. 882
   B. An In-Depth Examination of the Three-Step Process .... 883
II.  Key #1: Develop a Niche Practice ......................................... 883
   A. A Niche Practice Is Not a General Practice Area........... 884
   B. Refining Your Niche ...................................................... 884
      1. Niche Work .............................................................. 885
      2. Bread-and-Butter Work ............................................ 885
      3. Junk Work ................................................................. 885
III. Key #2: Network and Market ................................................ 886
IV.  Key #3: Provide Great Service .............................................. 891
Conclusion ........................................................................................ 891

INTRODUCTION

The legal world has changed, and most lawyers have not kept up. But it is mostly not our fault.

From grade school through law school, we are trained to believe that our peers will judge us on our merits. And for lawyers, that usually means academic performance. Our 3.8 grade point average (GPA) in high school got us into a good college, our 3.6 GPA in college got us into a good law school, and our 3.4 GPA in law school got us a solid first job—at least until fairly recently.

* Dan Harris is a founding member of Harris Moure, an international law firm that focuses on representing American companies overseas from its offices in Seattle, Chicago, Las Vegas, Beijing, and Qingdao. He is also the coauthor of the award-winning China Law Blog (http://www.chinalawblog.com). Dan received his B.A. from Grinnell College and his J.D. magna cum laude from Indiana University School of Law.

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The problem with the real world for lawyers today is that merit and grades often take a backseat to horrible things—for most lawyers, anyway—like profits, networking, return on investment, business generation, and marketing. Lawyers tend to approach the gritty business issues related to lawyering in one of the following four ways:

1. They ignore them;
2. They loudly proclaim their hatred of them—and then they ignore them;
3. They leave the practice of law entirely; or
4. They embrace them.

Based on my experience, I put less than one percent of all lawyers in category four. Again, it goes back to our training. We have been trained to believe that substance is everything, and certainly most lawyers believe it is the one thing that will determine our overall success. We have been trained to be skeptical of anything that cannot be easily tested, quantified, or verified by evidence. We have been trained to be able to provide clients with ten reasons why their deals will not work and another ten risks they will face even if the deal might work. We have been trained to trust our own research and ourselves, and to be skeptical of anyone without an education like ours. We have been trained to look to the past to determine the present and the future. And, of course, we have been trained to pretty much always take the path of least risk.

In other words, we have been trained to be just about the worst businesspeople possible. Good businesspeople take risks, oftentimes even ignoring the list of risks their lawyers have provided them. Good businesspeople act without endless research. Good businesspeople make decisions based on instinct, experience, and what they hear from others. Good businesspeople act and focus as much on their beliefs for the future than on their interpretation of the past.

I

THREE KEYS TO FUTURE SUCCESS

A. Marketing Is Imperative

Lawyers in small and midsized business law firms need to market themselves if they want to survive and be competitive. As obvious as this may be, many lawyers will not admit this, many more have not
internalized this, and even more refuse to invest the necessary time and money to actually do this.

Countless articles have been written about what lawyers must do to market themselves.1 Most of these, in one form or another, urge lawyers to engage in the following three-step process:

1. Develop a niche practice;
2. Network and market; and
3. Provide great service so that you will get additional work via word of mouth.

All three of these things make sense. And doing all three correctly will generate legal work. The problem is that few articles provide pointers for actually doing these steps correctly, and few lawyers have figured out what doing these three things really entails.

B. An In-Depth Examination of the Three-Step Process

The deeper problem is that following the three-step process is complicated, time-consuming, and specific to each lawyer’s individual practice. Many lawyers are simply not equipped to pull these things off. Too many lawyers are unable or unwilling to take risks, to “put themselves out there.” Few lawyers are willing to examine and act on the future, or to spend the time and money necessary to communicate meaningfully with potential and current clients.

I examine below each of the steps in the three-step process so often prescribed, and in doing so, I also address some of the more common roadblocks that prevent private practice lawyers from adequately preparing for, or investing in, their own futures.

II

KEY #1: DEVELOP A NICHE PRACTICE

Lawyers tend to view niches much like they view everything else: as a legal matter. This is the wrong approach. In formulating and developing their niche, lawyers need to think like potential clients.

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A. A Niche Practice Is Not a General Practice Area

Ask a lawyer what she does and she will usually respond with something like “business law,” “intellectual property law,” or “family law.” These are not really niche areas; these are general practice areas. Nonlawyers do not think in these terms. Take, by way of example, a small toy company that is contemplating having its toys manufactured overseas, but is hesitant to do so for fear of counterfeiting. This sort of company is probably more likely to think that it needs a lawyer who understands the toy business rather than an intellectual property lawyer. How, then, do you convince small toy companies that you are a “toy lawyer”? By convincing them that you know and understand the toy industry.

A ten-second glance at Hughes Media Law Group’s website tells you that it does “media law,” and its primary clients are media companies. This firm has committed to its niche. You know immediately what this firm does and the companies it seeks to represent. Additionally, after only a quick look at Canna Law Group’s website, you instantly know that this firm (actually, it is a practice group at my firm) does cannabis law. What is cannabis law? It is whatever cannabis businesses consider to be cannabis law. This website would not be nearly as effective in targeting the cannabis industry if it spent valuable homepage space explaining how the firm has “extensive” experience handling regulatory, licensing, corporate, and intellectual property matters.

B. Refining Your Niche

How, then, can you develop your own niche? Look around. What skills do you have? What kinds of companies need a lawyer with those skills? What is your personality, and what kinds of clients suit your personality? Which industries are growing or emerging? What new industries have sprung up in your area of expertise? In what industries do you already have friends and connections? What are the new niches for law firms in New York, Los Angeles, San Francisco, or other big cities? Do your own research. Figure it out. Choose what you think will work for you.

And then stick with it, as it will take a long time—one year, at least—for you to fully understand who within your niche will be your

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best clients. It will take just as long to figure out the best ways to market directly to those companies based on what they do and what they are looking for in a lawyer. Then add on another couple of years for your research and marketing efforts to really start paying off.

You must be patient in trying to build your niche, and that means focusing on getting the niche work you want and rejecting the work that does not dovetail with that niche. Have the courage to turn down work that is not a good fit, and spend the time you gain from rejecting those matters in building your niche experience. Taking work outside of your niche is a distraction from growing your practice into what you want it to be. My law firm puts potential incoming legal work into one of three categories:

1. **Niche Work**

   This is the work we are well-known for doing. This is the work that we frequently get by referrals from other lawyers. This is the work that we love to do, and the work to which we devote ninety-nine percent of our efforts in securing. This is the work for which we can and do charge premium prices. This is the work around which our firm is focused.

2. **Bread-and-Butter Work**

   This is the work that comes to us mostly as an offshoot of our niche work. Often, it comes from existing clients who use us for our niche work or referrals from those same clients. We are good at this work, and we get our regular rates for doing it. We will gladly take it when it comes in the door, but because many other law firms do this same sort of work, and we are not particularly well-known for it, it does not make sense for us to focus on it or to spend more than minimal time or money marketing it.

3. **Junk Work**

   This is the work in which we either have no interest or no expertise. Even if we were to be paid our regular rates for this work, we would not want it, and we do not take it. This work does not advance our firm’s long-term expertise or goals. We maintain a list of good lawyers who do the kind of work that we do not want, and we happily refer this work to them, which creates goodwill. They, in turn, refer the work that we want to us. You should never take junk work—ever. Doing so likely will make both you and your client unhappy,
and doing so will further divert you from your core goal of obtaining niche work.

You need to determine for yourself which kind of work goes into each category. One lawyer’s junk is another lawyer’s niche.

III

**KEY #2: NETWORK AND MARKET**

Your legal work will come from people—either via referrals or directly from clients or prospective clients. For you to get that work, the right kind of people need to know about you. Networking can be an effective way to spread the word about you, your expertise, and your practice. Before you start networking, you should ask and answer the following questions about yourself:

1. Who do you want to know about you?
2. What do you want these people to know about you?
3. What are the best ways for you to get these people to know what you want them to know about you?

You want to be known by two kinds of people: those who can give you the work you want and those who could refer that work to you. You should determine who these people are by doing the following analysis, among other things:

1. Determine who wants your niche services and who is willing to pay top dollar for them. Start by looking at who has already paid for those services from you and from others.
2. Determine the extent of your reach—geographically—by type and size of company and perhaps even by type of person. Start narrowly and expand if necessary, rather than the reverse.
3. Gather information about the industry or industries you will be targeting and keep abreast of new industry developments. Use this information to define your target clients. When meeting with prospective clients in that industry, showcase your knowledge about the industry. This will help you convince those you are targeting that you are an expert.
4. Figure out what your competitors are doing, both those who seem to be succeeding and those who are not. Do they list their clients on their websites? What kinds of lawyers are they hiring? Where are they speaking and on what kinds of topics? What are they writing about, and where are they getting published?
5. Talk to those in the industry. Talk to your own clients—all of the time. Show that you are an insider, and actually become an insider.

6. Determine who your ideal clients and referral sources are, and then determine how best to communicate with them. Will it be online or over lunch or both? Will you write articles or give speeches or both? Where will you speak or write? On what topics? Are you going to target beginners by explaining the legal basics, or are you going to discuss specific, complex issues or both? Remember that you should speak and write differently to a general counsel of a multibillion dollar business than to the sole owner of a start-up. Once you start communicating with ideal clients and referral sources, keep a chart of your efforts and the success rates; then tweak your marketing to focus on the marketing strategies that yield the best results.

When networking in person, you should assume that nobody wants to hear much about you personally, and they want to hear even less about your last great legal conquest. Do not pressure anyone. If you push for legal work, you likely will not get it. Your goal should be to make a meaningful and lasting connection, not to “make a sale.” Instead, think of ways that you can help your new connection, whether by forwarding a relevant article (regardless of whether it was written by you or by someone else) or by inviting that person to an interesting presentation.

You will be surprised at how often being able to discuss movies, mountain biking, baseball, politics, or history will get you work. Ego will not get you anywhere with the people who matter—listening and offering to help will. The same is true when networking online.

You have probably heard about the need to have a prepared “elevator speech” to describe yourself. You actually need a lot more than that. You should know your niche and how companies can take advantage of your services so well that you can effortlessly speak on those subjects for anywhere from twenty seconds to an hour, depending on the situation.

You also must stay current regarding just about everything in your niche. The more you become an expert on the topic, the more confidence and ease you will portray when you speak about it. But again, be careful when talking about yourself. Any speech about yourself and what you do should be reserved only for those situations in which you have essentially been asked to present it.
Marketing is different from networking in that certain forms of it can and should involve you explaining what you do in sufficient detail. You should explain yourself in a way that shows others you have the expertise they need. “Show” is key—show your expertise to people, do not “tell” others about it. Like networking, marketing can be done both in the real world and online. Lawyers commonly market online by writing articles or blog posts and by advertising on websites. Lawyers typically market in the real world by writing articles for print, advertising in print, and by speaking at events. Lawyers should also think of their own websites as a marketing tool, regularly refreshing the content and keeping it up-to-date.

Before you start marketing, you should decide exactly what it is you will be marketing. You market your niche, yes, but sometimes you market just a subsection of your niche. If you are a toy lawyer and everyone in the toy industry is talking about a troubling IP case that just came out, and you know how to help on the issue in that case, you should consider a marketing blitz that portrays you as the toy IP expert.

Many years ago, an expat-owned company in Thailand called me to see whether my law firm could help recover around $100,000 owed to it by a Canadian credit card processor. I was fascinated by the case and discussed it at length before determining that it was just too small and complicated for my firm to take. The very next day, I got another call involving the same Canadian credit card processor. This one came from one of our regular clients, based in Australia, who was owed more than $350,000. I immediately ran a Google advertisement, asking if anyone was owed money by this specific credit card processor, suggesting that we could help them if this particular company did owe them money. We ended up representing around fifty companies at our regular hourly rates, plus a bonus for actual recoveries, which we obtained for all of our clients. The Google ad cost us a whopping fifty-five dollars.

Faced with that same situation today, I would probably post about it on Facebook and on Twitter, and I would also consider writing an article for LinkedIn Pulse (because those go live immediately) on *What to Do When Your Credit Card Processor Keeps Your Money*. All of these strategies are free and all can be up and live instantaneously.

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Finding Your Legal Niche

Just as with networking, professionals market to those who can impact whether you get retained now, six months from now, and one year from now. Here is a list of some of the things I do to market myself as someone who helps American companies in China:

1. I spend one to two hours every morning reading recent news on China, focusing on issues that may affect current and future clientele.
2. I write or edit five or six posts per week for the China Law Blog. This blog has been around for nearly a decade, and it has more than 3500 posts.
3. I administer the China Law Blog Group on LinkedIn. This group has around 10,000 members, which is more than five times that of the closest competitor, and many of its members are CEOs, CFOs, and general counsel.
4. I maintain a China Law Blog Facebook page, I tweet under my own name, and I feed both of these almost daily.
5. I write a weekly column on China law for Above the Law.5
6. I write an article on China law every couple of weeks for LinkedIn Pulse.
7. I write a column on China law every couple of weeks for Forbes Magazine.6
8. I write every year or so for the Wall Street Journal.
9. I speak around twice a month at seminars or webinars on China—not just pure legal topics, but broader, China-focused topics.
10. Every few months, I travel to various cities in the United States and overseas to meet with clients, potential clients, and key influencers.
11. I constantly reach out via e-mail and social media to those in the China space whom I respect and like.
12. I communicate just about every week with a reporter who writes about China. Sometimes the reporter contacts me; other times, I reach out to reporters with story ideas.
13. I have lunch with someone from outside my firm at least twice per week and with someone new at least once per week.

I spend at least twenty hours per week marketing or networking, and this does not include the one to two hours I spend staying current on China daily. There is no substitute for putting in the time yourself. Do not fool yourself into believing that spending hours at an event is all you need to do to market yourself. Far too many lawyers think that going to a bar association lecture is marketing. Unless your fellow local lawyers are a referral source, it is not. I realize that my situation is different from many lawyers in that one of my chief roles at my firm is to market and network. Nonetheless, my point stands: marketing takes massive amounts of time, and you need to do most of it yourself.

Speaking is a great way to market, so long as you speak at a good event, and so long as you give a good presentation. A good presentation is one that gives the audience the information it wants to hear in as entertaining a way as possible. Give a speech that is catered for your particular audience.

Nine times out of ten, when I give a speech, mine is the shortest biography of all the speakers, and I implore whoever is going to introduce me to keep it short as well. My speech and my PowerPoint do not explain who I am or what I do—the seminar materials have already covered that. I will never suggest in a speech or an article that anyone should retain me. None of the 3500-plus China Law Blog posts have done that. If someone is not going to retain you as their legal counsel based on the substance of your article or your speech, they are definitely not going to retain you because you gave them a long summary about your law firm or because you explicitly requested that they do so. Clients want to retain a lawyer who seems to be in demand, not a lawyer who seems to be desperate.

Even when a company calls or e-mails you specifically to talk about retaining you, you must be careful about overselling. Do not brag about yourself. Rather, talk about your potential client’s problem in a way that makes it apparent you are the right person for the legal task. Again, be sure to ask questions and to listen. Nothing endears you more to a potential client than being able to tell them that their problem is less complicated and dire than they believed before they called you. Always try to figure out the least costly way to solve the problem; you will do better in the long-term if you do.
IV

KEY #3: PROVIDE GREAT SERVICE

Lawyers too often equate being a good and “responsive” lawyer with providing great service. Being a good and responsive lawyer is the bare minimum required and should be assumed. Great service is service that causes existing clients to want to go out of their way to send you work. Your clients will only go out of their way to send you work if they are truly convinced that doing so will make them look good to those whom they refer to you.

Any time you get a referral, acknowledge it and reward it. I buy a bottle of wine from a local winery for anyone from out-of-state who tries to refer me work and chocolates from a Michigan town near my hometown for anyone from Washington State. My gifts are personal, and they go out whether I end up getting the work or not.

Growing a practice via word of mouth usually requires more than just getting the job done right. Below are some of the things I do to try and provide great service:

1. I always tell the truth; I don’t sugarcoat it.
2. I communicate with my clients—really communicate with my clients. I try never to let a client feel ignored.
3. I know my clients.
4. I know my clients’ businesses well.
5. I provide my clients with relevant information outside the projects on which I am working.
6. I strive to see the big picture from my clients’ perspective.
7. I respect my clients’ time.

Clients often do not know exactly what they need from you, and they often need you for more than they initially realize. Only by listening can you figure that out. Your goal should be to determine your clients’ issues and then to figure out solutions that fit their desires and goals.

CONCLUSION

Generating good, sustainable legal work can be summed up as follows:

1. Do not think like a lawyer when you are not engaging in actual legal work—think like your clients.
2. Develop your niche and become an expert on it. Strive to be the expert on it.
3. Convey market substance. Write about your niche and topics within your niche everywhere you can. Speak about your topic everywhere you can.

4. Do not give potential clients and referral sources the hard sell. Talk with them about their problems and your experience. Let them put two and two together.

5. Be flexible and be determined.
The Future of Legal Education:
Preparing Law Students to Be Great Lawyers

Introduction ...................................................................................... 894
Summit Recommendations..................................................................... 895
   A. Teaching Methods and Content ............................................ 895
   B. Lawyer Competencies ......................................................... 896
   C. Core Competencies ............................................................ 897
   D. Transition from Law School to Practicing Law .................... 898
   E. Restructure the Bar Exam .................................................... 898
   F. Training Law Professors ....................................................... 899
   G. Law Students Serving the Underserved .............................. 899
Conclusion........................................................................................ 900

* Peter S. Vogel is a partner at Gardere Wynne Sewell LLP in Dallas, Texas. He earned his B.B.A. at University of Texas at Austin, his M.S. in computer science at American University, and his J.D. at St. Mary’s University School of Law in San Antonio. After law school, Vogel became an IT consultant and then a sole practitioner for fourteen years. In 1992, he joined the law firm Gardere Wynne Sewell LLP. As an active bar member, Vogel has held positions as president of the Dallas Bar Association (1994) and chair of the board of the Dallas Bar Foundation (2003). At the State Bar of Texas he has also served as a member of the State Bar of Texas board of directors, founding chair of the Computer and Technology Section, and chair on a number of committees, including Computer Technology and Minimum Continuing Legal Education. Vogel was founding chair of the Texas Supreme Court Judicial Committee on Information Technology (JCIT), which is responsible for helping automate the Texas Court System and establish the Texas e-filing system. Vogel has also been an adjunct professor at the Southern Methodist University Dedman School of Law since 1986, where he has taught courses on information technology (IT), software licensing, law office management, e-discovery and e-evidence, and the law of e-commerce. Vogel served as cochair of the ACLEA Summit Issues Group.
INTRODUCTION

For decades, many law school graduates have looked back at their legal education and concluded that they were not properly prepared to practice law. Consequently, from time to time, the American Bar Association (ABA) and other bar groups have studied how to change law school education. In fact, in 2009, the Association of Continuing Legal Education Administrators (ACLEA), the American Law Institute-American Bar Association (ALI-ABA), and a number of other organizations held a three-day discussion at Arizona State University on the future of legal education, the Critical Issues Summit. The event “brought together CLE professionals, law school deans and faculty members, law practitioners, bar leaders, judges, mandatory CLE administrators, law firm educators, and other experts on lawyer professional education to study and respond to the challenges of equipping lawyers to practice in a rapidly changing world.” Among other things, the Critical Issues Summit produced a final report and sixteen recommendations addressing issues related to law school preparations for legal practice and legal training for lawyers after law school.

After the Critical Issues Summit, ACLEA established a Summit Issues Group in an effort to continue the dialogue about the future of training law students to practice law. This Article highlights key issues from the Critical Issues Summit that are particularly important to changing law school education today. Additionally, it offers suggestions that could further improve preparing students for the legal profession.

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1 See, e.g., R. Michael Cassidy, Can Law Schools Prepare Students to Be Practice Ready?, 17 CHAP. L. REV. 153, 156 (2013) (describing the author’s first day at a law firm after graduation).
3 About the American Law Institute, ALI-CLE, http://ali-cle.org/index.cfm?fuseaction=about.index (last visited Mar. 9, 2015). ALI-ABA is now known as ALI-CLE. Id.
6 Id. at 2–8; THE FINAL REPORT, supra note 4.
SUMMIT RECOMMENDATIONS

In the Sections that follow, I will describe specific portions of the Summit Recommendations and reflections I have had as a law student, lawyer, and adjunct law professor. Unlike most people who attend law school expecting to pursue legal careers, I went to law school never intending to practice law. Instead, I planned to pursue a career in IT consulting after law school, and therefore I taught graduate computer sciences while I studied law. While I became a sole practitioner and eventually went on to join a law firm, my computer science and legal background have given me particular insight into IT legal matters. Further, as an adjunct law professor, I have had the wonderful opportunity to teach a variety of courses on IT legal matters and share my experience with hundreds of students, many of whom I keep in touch with, and I have even practiced law with some former students. As a result, I am also able to offer a unique perspective on how the Summit Recommendations may be helpful to legal education for law students based on my experiences and students’ input.

A. Teaching Methods and Content

Studying law in the United States has followed pretty much the same process for generations, but the Critical Issues Summit suggested a fundamental change:

[Recommendation] 1. Law schools should examine their teaching methods and the content of their curricula to ensure that their graduates are capable of serving as effective beginning professionals. Such examination might include:

a. Defining the learning outcomes they wish to produce;

b. Designing the curricula and engaging faculty to produce those outcomes;

c. Using proven teaching methods that will produce those outcomes, including the application of the latest research on adult learning styles and generational differences in learning; and

d. Evaluating their success at achieving those outcomes.7

From a historical perspective, Recommendation 1 represents a shift away from the Socratic method most American law schools use. As

7 BINGAMAN, supra note 5, at 2.
an adjunct professor, I lecture in class and encourage discussion about cases and issues, but I do not use the Socratic method since I do not believe a professor attacking what students state in class about a case really helps them learn or better prepares them to practice law. Following Recommendation 1 would require law schools to reconsider teaching methods which will no doubt be difficult for many reasons, not the least of which is that change is generally not embraced, as law professors would have to learn new teaching techniques. Additionally, most law professors were taught with the Socratic method, so it seems likely they would continue to teach law the way they learned law.

B. Lawyer Competencies

[Recommendation] 2. Building upon the defined learning outcomes from Recommendation 1, law schools, the bar, and the bench should partner in the career-long development of lawyer competencies. In particular, law schools should initiate the continuum of legal education by integrating into their curricula the core practice competencies described in the ABA Model Rules of Professional Conduct, the MacCrate Report, the Carnegie Report, and the Canadian Centre for Professional Legal Education competency evaluation program in achieving their desired learning outcomes.8

The ABA has long emphasized legal education and Recommendation 2 focuses not only on the Model Rules, but also on the 1992 MacCrate Report, Legal Education and Professional Development—An Educational Continuum.9 The MacCrate Report examines legal education since World War II and analyzes how Socratic method legal education has evolved.10 As one of the most significant works on legal education, the MacCrate Report was a long-term effort of legal scholars, including professors and deans from around the country, and took a historical view of the subject.11 In 2013, the ABA issued a report that reviewed the state of legal education and challenges facing the profession twenty years after the MacCrate Report, concluding that

8 Id.
10 Id. at 6, 236.
11 Id. at v–vi.
The Future of Legal Education: Preparing Law Students to Be Great Lawyers

The insight of the MacCrate Report that criticisms of legal education that do not take into account the different roles that pre-legal education, law schools and the practice of law play in the education of today’s lawyers are bound to be incomplete and misleading is as true today as it was twenty years ago.12

Recommendation 2 also encourages schools to review the Carnegie Foundation for the Advancement of Teaching report, *Educating Lawyers: Preparation for the Profession of Law*, which was a two-year study of legal education. The study analyzed sixteen law schools in the 1999-2000 academic year.13 The report reconsiders “thinking like a lawyer” as the primary construct for legal education.14

C. Core Competencies

[Recommendation] 3. Law schools should continue to refine their lists of identified core practice competencies, recognizing that essential competencies will vary by stage of education and by practice area.15

Recommendation 3 should spur law schools to train students in core competencies. These core competencies would differ from traditional legal education in their instruction of skills needed to actually practice law.16 For example, if a student plans to practice estate planning and probate, that student should take courses on how to write, probate, present, and contest wills. Because Recommendation 3 is based on time and experience,17 the legal educational training encompassing what is required to write and probate a will should be accompanied by a practicum that instructs the student how to actually probate a will.


14 Id.

15 BINGAMAN, supra note 5, at 3.

16 Id.

17 See id. (Recommendation 3 refers to “the need across the educational continuum to identify essential practice competencies as the basis for planning career-long learning objectives for lawyers.”).
D. Transition from Law School to Practicing Law

[Recommendation] 4. Law schools, the bar, and the bench should develop and encourage transitional training programs (defined as ones that teach or improve practice skills) to begin in law school and to continue through at least the first two years of practice. Approaches to implement this recommendation might include:

a. Experiential learning opportunities in law school curricula, for example: practical experiences, clinical experiences, skills courses, internships, and mentorships;

b. Post-admission supervised apprenticeships (similar to paid articling in Commonwealth countries) or other practice experiences such as working in legal services programs consistent with law graduates’ financial situations; and

c. Universal mentoring requirements for new admittees.18

Many CLE programs are directed at “nuts and bolts” for newly licensed lawyers, but maybe the two-year timeframe the Recommendation seems to suggest is too short, since developing a body of experience as a lawyer may take up to five years depending on the specialty. A more appropriate minimum timeframe would be “for the first five years after law school.”

E. Restructure the Bar Exam

[Recommendation] 5. Regulatory authorities should consider restructuring one-time bar examinations into phased examinations over time, linked in part to attainment of legal practice skills, with some parts of the examination occurring as early as in the law school years.

Actually, the bar examination does not really help someone be prepared to practice law; instead, it is a measure of how many different areas of law an individual knows the day of the examination. Most law students, dreading the current one-time examination, would welcome a different bar examination. Recommendation 5’s phased examinations over time sounds like a better experience for students because initial testing that begins in school would give both students and schools important feedback on how they are preparing for the profession.20

18 Id. at 3.
19 Id. at 4.
20 See id. at Reporter’s Comment.
F. Training Law Professors

[Recommendation] 15. Law schools, law firms, and CLE providers should train their instructors in: teaching skills, effective uses of technology to enhance learning, intergenerational communication issues, the communication of professional values and identity, and the design of effective clinical experiences.21

In order to change teaching styles away from the Socratic method, Recommendation 15 suggests that law professors rethink how they teach and use current technology. It encourages pragmatic clinical experiences and the development of effective communication with younger generations of students. One way professors can improve their communication with younger students is by embracing social media. Many students use social media to communicate thoughts and to exchange business opportunities. By using the same technology and mediums to communicate as students, professors may be better able to tailor their teaching habits to meet current communication expectations, thereby improving the effectiveness of their teaching and ensuring more information reaches students.

G. Law Students Serving the Underserved

[Recommendation] 16. Acknowledging our professional responsibility, the legal community should continue to develop programs that will prepare and encourage law students and all lawyers to serve the underserved.

a. As part of the legal community, law schools, if they have not already done so, should incorporate into their curricula the principle that improving access to justice for all is every lawyer’s responsibility, and should offer students early in their law school experience exposure to underserved communities and opportunities to provide legal assistance to those communities.

b. The legal community in each jurisdiction should collaborate to help newly admitted lawyers develop the skills that will enable them to provide effective legal services to underserved communities and to create opportunities for those lawyers to provide such services. . . .

c. An entity of the ABA should serve as a clearinghouse for these programs to provide examples of best practices and innovative ideas.22

21 Id. at 7.
22 Id. at 7–8.
As a first-year law student who worked at Legal Aid, I learned a great deal about the reality of legal needs and access in our society. By interviewing prospective clients and trying to understand their legal plights, I gained invaluable knowledge I could never obtain through traditional law school education. Since the legal community has assumed the burden of assisting the less fortunate in our communities, it seems appropriate to encourage service to the needy while students are still in school. Not only will students encounter current legal issues that complement their instruction, but they will also hopefully understand the value of helping the underserved and carry that with them into practice.

CONCLUSION

Given the fundamental role of the law in our society, it is critical that pragmatic preparation for future lawyers begins in law schools by updating the current Socratic method to address issues the Critical Issues Summit Recommendations present. Future lawyers will benefit from a revised educational system by being better prepared to assist their clients and society.
Retrospective

In 1965, Intel cofounder Gordon Moore posited that the number of transistors per square inch would continue to double roughly every two years. Over the intervening five decades, Moore’s Law has largely held true, reshaping countless industries in the process. Legal services have been no exception. Stephen Furth’s seminal 1970 Oregon Law Review article—Computer Uses in the Law Office—foresaw the numerous benefits that computers would offer the legal profession.

Furth’s optimism was well-placed. The “paper chase” is now largely paperless. A few moves of the fingers provide a lawyer access to every case ever published. Legal data mining and regression analysis will only further shake things up. The following two Retrospectives provide a look at how far we’ve come over the past four-and-a-half decades. More specifically, these Retrospectives provide modern addenda to Furth’s work. Given Moore’s Law, the 2060 Oregon Law Review editors will have ample opportunity for further revision.

Oregon Law Review
2014–15 Editorial Staff

Legal Information Revolution!
A Commentary on Computer Uses in Law Offices

INTRODUCTION

Imagine “a device that can be interrogated via the computer by means of a keyboard which may be part of a typewriter or may be attached to a cathode ray tube, which is a display device resembling a television set.” In 1970, computers and their uses were completely novel to the legal community, as Stephen E. Furth’s descriptions show in his article, Computer Uses in Law Offices. Lexis was introduced just two years after Furth’s article, and one of its early prototypes actually used Sony color television sets as monitors.

Furth ends his article by noting that lawyers do not have the time or motivation to learn the new technology, and he encourages law schools to close the communication gap between lawyers and technicians by educating and training students on legal technologies.
While lawyers arguably have been slow to adopt new technology, they have been ahead of other fields in the area of computer-assisted legal research. The driving force behind this success is probably the fierce rivalry between the two main vendors of online legal information—Lexis and Westlaw—even though law schools had programs to introduce the systems to students.

This Retrospective discusses the evolution of computer-assisted legal research following the publication of Furth’s article in 1970. It explores how the digital revolution has impacted legal education and the profession as a whole, and it concludes by discussing how the next generation of lawyers can be trained in the digital world.

I

COMPUTER-ASSISTED LEGAL RESEARCH EVOLUTION

As noted in Furth’s article, lawyers and technologists were already experimenting with computerized legal research prior to 1970. In 1963, the United States Air Force created a database containing the full text of some Supreme Court decisions,4 and Professor John Horty at the University of Pittsburgh created an electronic library of public health statutes.5 Professor Horty’s project in particular caught the attention of the Ohio State Bar Association, which formed a committee (the Ohio group) to consider creating a “nonindexed, full-text, on-line, interactive, computer-assisted legal research service.”6 The Ohio group contracted with Data Corporation to build a system called Ohio Bar Automated Research (OBAR).7 While OBAR was starting to show promise, building the system required far more money than the Ohio State Bar Association could raise.8 Then, in 1969, Data Corporation was acquired by Mead Corporation, a paper company.9 Mead determined that computer-assisted legal research was potentially profitable enough to expend tens of millions of dollars to redevelop OBAR into a nationwide system.10 By 1973, Mead introduced the legal world to Lexis. The system contained the U.S.

5 Harrington, *supra* note 2, at 544.
6 Id. at 545.
7 Id. at 547.
8 Id. at 549–50.
9 Id. at 550.
10 Id.
Code, federal case law, tax regulations, and some state materials. 11 The terminal was similar to Furth’s description of a computer: it was a monitor that looked like a television set with a keyboard that resembled a typewriter. Because lawyers had “no idea how to type, much less how to control a computer,” the keyboard had function keys, printed with “legends appropriate to the legal research functions they performed.” 12

Meanwhile, West Publishing Company dominated the legal publishing market. For nearly one hundred years, West’s National Reporter System standardized American jurisprudence, creating unified case reporting and indexing. 13 Its authority and accuracy were undisputed and unchallenged. Cases that were not included in the system were simply considered “unpublished.” 14 The other invaluable tool for legal research was the much smaller Shepard’s Citations, which tracked citations so lawyers could determine a case’s validity. As Robert Berring explains, “at its apex, the controlled paper universe of legal information consisted of a set of West reporters and a set of Shepard’s Citations.” 15 These books, like the firm libraries that housed them, were just part of overhead, an assumed cost of practicing law. 16 Lexis, which had no paper roots, was about to change everything.

Lexis was quickly adopted by law firms, government agencies, and universities. Although West Publishing introduced Westlaw two years after Lexis, it took much longer for Westlaw to truly catch up. In fact, in the early days “the consensus of opinion was that the Lexis system was about to drive WESTLAW out of the market and into oblivion.” 17 Why? Westlaw made the poor decision to include just case headnotes in its system—not the full text of the cases.

It seems obvious today that full text searching is the major reason to use computer-assisted legal research. However, to fully understand the situation in the 1970s, it is useful to return to Furth’s article. As Furth explained, there would be two basic techniques to organize and

11 Id. at 553.
12 Id. at 552, 552 n.4.
14 Id.
15 Id. at 195.
16 Id. at 196.
access legal literature: (1) the “mechanization of conventional indexing” and (2) the “full text” system.”\(^{18}\) His matter of fact comments concealed a raging controversy. The Ohio group’s proposal of a full-text, online, interactive system was radical and unleashed a great deal of furor. The system’s concept was a direct affront to the industry standard digests. Librarians argued that a system which searched the entire text of legal materials could not produce sufficiently specific results and would be prohibitively expensive.\(^{19}\) Lexis followed the Ohio group’s revolutionary idea, and Westlaw took a more conservative, conventional approach.

Westlaw quickly fixed its mistake. By 1978, it was full text; in 1980, West redesigned Westlaw, upgrading its speed and reliability, adding new databases, and licensing \emph{Shepard’s Citations}.\(^{20}\) The next year, Lexis boasted, “more Shepard’s than is offered by any other computer-assisted research service.”\(^{21}\) Westlaw countered that its updates were “on-line four to six weeks sooner than any other computerized case history service.”\(^{22}\) A fierce competition was on.

The rivalry between the two companies cannot be overstated. Thousands of databases were added as the companies tried to keep up with each other. The technology advanced rapidly as each company tried to make its system more convenient and user-friendly. In fact, the advancements kept time with the fast-paced information and communications technology developments. The dial-up terminals became programs for personal computers. As soon as Internet access became available, an Internet address replaced the dial-up number. The programs began to incorporate HTML, and later web browser interfaces were developed. Searching also became more intuitive, evolving from Boolean, to natural language, to the current artificial intelligence algorithms.

While Westlaw and Lexis expanded and improved, other publishers became involved in computer-assisted legal research. In the 1980s, some vendors began producing CD-ROMs containing the

\(^{18}\) Furth, supra note 1, at 220.

\(^{19}\) Harrington, supra note 2, at 546. According to William Harrington, who was part of the Ohio group, “Many law librarians were appalled to learn that the new concept of computer-assisted research would operate free of their dearly beloved, elaborate structures of indexes and digests. Some of them were intemperate in their scorn.” \emph{Id.}

\(^{20}\) See Deborah E. Shrager, \emph{Saying Farewell to a Classic: Goodbye to Westlaw.com}, AALL SPECTRUM, Dec. 2014, at 27, 28.

\(^{21}\) \emph{Id.}

\(^{22}\) \emph{Id.} at 28–29.
primary authority for a particular jurisdiction. Because legal research is a lucrative market, giant publishers took interest in the area. Eventually, Lexis and Westlaw were acquired by much larger companies. Reed Elsevier PLC purchased Lexis in 1994, and Thomson Publishing acquired West Publishing in 1996. That year, Reed Elsevier further shook up legal publishing by purchasing the parent company of Shepard’s. These changes were huge; one commentator declared, “The tectonic plates of legal information are shifting.”

An even bigger change was brewing. During the mid-1990s, the World Wide Web was starting to expand. The web made it possible to easily and instantly publish and access information on the Internet. Courts could post their opinions to their websites the day of the decision. Government agencies could provide access to material online that previously required a trip to the agencies’ offices. The full statutory code could be available on a state legislature’s website. Sophisticated search engines like Google made finding legal information seem easy.

Lexis, Westlaw, and most other legal publishers moved to the web, too. Unlike the government websites, they still required hefty subscription fees. Whether free or not, the world of legal information almost completely transformed. Computer-assisted legal research became simply legal research.

II
THE IMPACT (FALLOUT?) ON LEGAL EDUCATION AND THE PROFESSION

The transformation of legal research has had a rather profound effect on legal education and the practice of law. The most obvious effect is that computer-assisted legal research has made some aspects of research much easier and faster. Previously, consulting indexes,

23 See Foster & Kennedy, supra note 4, at 281.
24 See Berring, supra note 13, at 198.
25 Id. at 198–99.
26 Id. at 199.
27 See Shrager, supra note 20, at 31.
28 See Foster & Kennedy, supra note 4, at 282 (“Where the attorney once walked from digest to reporter volume to reporter volume to Shepard’s, and carried on research surrounded by a pile of books, she can now sit at the computer and gain access to databases larger than most law libraries.”).
pulling volumes off the shelf, and doing anything involving Shepard’s took hours of tedious effort, and yet it required some level of expertise. It was the perfect job for law clerks and entry-level associates. Computer-assisted legal research accomplished these tasks in minutes, and law clerks and new associates became much less valuable (along with the library staff that re-shelved the books). Some speculate that e-discovery software now allows one lawyer to do the work that used to require 500 lawyers. Law firms started hiring a few lateral attorneys instead of armies of new associates. The legal industry—and legal education in particular—is still undergoing a difficult period of adjustment.

Computer-assisted legal research has also changed how lawyers value legal research. In effect, it commoditized legal information in a new way. In the past, West reporters and Shepard’s were merely a part of overhead in a firm; “[p]aying for information was part of the fabric of practicing law.” However, with computer-assisted legal research, everything could be parcelled out and charged to the client. To attract customers, Lexis and Westlaw highlighted that the systems would pay for themselves. Firms would either pay by time spent on the system or per transaction, and then they would pass the cost onto the client. As one commentator notes, “a firm would never charge a client for a portion of its annual subscription to the National Reporter System, but the firm might very well bill a client for its share of the cost of online information.”

Clients understandably balk at high bills for legal research databases, and since the recession, some have started to refuse to pay for research. It is an interesting phenomenon because legal research is an essential part of practicing law. Nevertheless, law schools and

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30 See Berring, supra note 13, at 197.
31 Id.
32 Id.
33 Id.
librarians must now train students in the dubious practice of “cost-effective legal research.”

In fact, cost-effective legal research highlights one of the most profound ways that technology has changed legal research. With print, there was one system whose authority and credibility were unchallenged. Researchers did not have to evaluate the credibility of the source of the information. The world was small and well organized. Once students understood the system, they could focus completely on finding the right answer.

In contrast, the online world is huge and fragmented. Researchers need to constantly think about the cost, accuracy, authenticity, and reliability of their sources. Finding the right answer is just one of many concerns.

When the Ohio group first proposed a full text system, the idea was that it would “free the lawyers from the constraints of indexing. Boolean-logic searching, in effect, would allow each researcher to create an ad hoc index specific to the problem at hand.” The problem for students and some lawyers is that they still lack the understanding of the law to create an ad hoc index specific to their issue. A further problem is that many students do not know that they lack this understanding. Deborah Shrager explains the situation perfectly:

Having spent most of their lives using search engines, students can be over-confident about their ability to conduct effective research . . . . They need regular reminders about advanced and editorial features, the multitude of resources, and the importance of using a variety of strategies to uncover the most useful information.

Ironically, computer-assisted legal research was meant to simplify dealing with the vast amount of ever-proliferating legal information, but in reality it has made legal research much more complicated. The easy-to-follow steps to navigate a West-enclosed world of legal information have been replaced with something akin to fragmented, haphazard searching in a world of anarchy (that may or may not be cost efficient).

36 See generally O’Grady, supra note 34.
37 See Berring, supra note 13, at 200.
38 Id.; see also O’Grady, supra note 34.
39 Harrington, supra note 2, at 546.
40 Shrager, supra note 20, at 31.
III
TRAINING THE NEXT GENERATION

How can students be prepared for searching through a morass of anarchy? Luckily, law librarians are still around to help. When Lexis first entered the market, computers were still very foreign to most people, including lawyers, librarians, and educators. Furth’s careful descriptions of the uses of computers attest to the fact that people needed a great deal of help fathoming their potential. Lexis had the daunting task of showing skeptical lawyers how to actually use these strange television-typewriter-phone devices.41

Lexis embarked on an extravagant marketing ploy to promote the system: it offered law schools free usage to ensure “future generations of attorneys would embrace the new service.”42 Westlaw followed suit and gave a free terminal and printer to subscribing law schools.43 Because legal research professors were still new to computers, vendor representatives graciously offered training sessions for the students.44

Forty years later, research instructors and librarians have vast knowledge of online legal research beyond Lexis and Westlaw. Although research programs vary, it is common to see online legal research fully integrated into the curriculum. Students rarely have to learn how to use the print version of Shepard’s or print digests since the online equivalents are more efficient and widely available at county law libraries.

In short, research instruction simply evolved to reflect the new online research environment, but the essence of research remains the same. Students still learn how the structures within the legal system generate legal knowledge. The end goal of research remains the legal knowledge contained within the legal documents; only the system of publication has changed. This new publication system is far more dynamic. It has broken up and expanded, and the ways that we navigate the new world are more refined and creative.

Certainly, first-year law students would probably prefer learning a rigid series of research steps with clearer beginning and ending points. However, once students move into advanced legal research, the possibilities of this new world of digitized information become

41 See Berring, supra note 13, at 196.
42 Id. at 196 n.31 (citation omitted) (internal quotation marks omitted).
fascinating. Students, scholars, and lawyers have easy access to information going far beyond the law. Law librarians show students how to navigate all kinds of wonderful sources that even ten years ago we had no way to access.

CONCLUSION

Since the publication of Furth’s article in 1970, computers have had a profound impact on how lawyers accomplish the essential task of legal research. While Furth clearly understood and explained how computers could benefit lawyers, the straightforward article belied the stirring revolution. First, the intense competition between Lexis and Westlaw led to incredibly technologically sophisticated systems. Later, the web dramatically opened the world of legal information to everyone. A period of adjustment is still taking place as we try to process the full impact of computers on the legal profession. However, as the world of legal information proliferates and research tools become increasingly sophisticated, law librarians continue to track information developments and interface between the overwhelmed student and the many resources available. It is also clear that throughout all the upheaval, legal information cannot be translated into legal knowledge without the core critical thinking skills of a lawyer.

45 See Shrager, supra note 20, at 31.
JAMES C. MELAMED, J.D.*

Computer Uses in Legal Practice—Yesterday, Today, and Tomorrow

Introduction ...................................................................................... 913
I. The First Disruptive Technology: The Word Processor
   and the PC .................................................................................. 915
   A. Dedicated Word Processors ............................................... 915
   B. Enter the PC and Mac ....................................................... 916
II. The Second Disruptive Technology: E-mail and the
    Internet .................................................................................... 917
III. The Third Disruptive Technology: Personal Mobile
    Devices ...................................................................................... 920
IV. The Fourth Disruptive Technology: The Cloud ....................... 922
Conclusion ...................................................................................... 924

INTRODUCTION

In 1970, some forty-five years ago, Steven E. Furth wrote *Computer Uses in the Law Office* in the *Oregon Law Review*.¹ Furth was a participating member in the Standing Committee on Law and

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Technology of the American Bar Association and manager of information systems marketing at IBM Corporation in White Plains, New York. At the request of *Oregon Law Review*, I have returned to and reviewed Furth’s original article to look at how law office computer use has since developed and evolved.

After accurately noting the legal profession’s general reluctance to engage in technologic change (some things have stayed the same), Furth predicted that economic pressures and the need to increase the productivity of law practice will motivate lawyers in increasing numbers to investigate the availability, potential benefits, and costs of computer-based data processing services. It is the intention here to review generally the possible applications of such equipment in the practice of law.

Furth both accurately perceived the legal professional’s general reluctance to embrace technologic change and understood that, over time, efficiencies and economic forces would bring about technologic change despite this resistance. Perhaps reflective of the author’s position at IBM, Furth seemingly focused on issues of data processing equipment, notably not discussing operating system development, application development, or connectivity. As I think back to my own entry into the legal profession in 1982, Furth’s focus on equipment is fully understandable. I remember well that my first dedicated word processing equipment was the initial technologic game changer for me and many other young lawyers. In fact, my sense is that the word processor was a necessary precondition to the rapid growth of mediation then beginning.

In his original article, Furth discussed four areas of potential computer benefits for the legal profession: (1) administrative (such as billing and payroll), (2) services for the lawyer (such as finding files and documents), (3) computer-assisted legal services (such as prediction of outcome), and (4) legal research. Furth should be complimented for his vision because there have been huge advances in all four realms. Administrative functions such as billing, payroll, and case management are now easily performed with such programs as Abacus or Clio—not only on the computer but also online from

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2 *Id.* at 217 n.*.
3 *Id.* at 217.
4 *Id.*
5 *Id.*
6 *Id.*
any location on any device. LexisNexis and Thomson Reuters offer sophisticated legal research capacities for both large firms and solo practitioners alike. Furthermore, software such as Picture It Settled offers sophisticated predictions of legal outcomes delivered to the smartphone in your purse or pocket.

Furth’s thinking was certainly limited by the computer development of his time. He did not, for example, envision flexible operating systems, application software, the Internet, broadband, wireless, smartphones, or “the cloud.” Building upon Furth’s thinking, there seem to be four related game-changing disruptive technologies understandably not envisioned in 1970: (1) the word processor and PC; (2) the Internet: e-mail and the web; (3) personal mobile devices; and (4) the cloud.

I

THE FIRST DISRUPTIVE TECHNOLOGY: THE WORD PROCESSOR AND THE PC

During the 1970s, typewriters such as IBM Selectrics progressed, becoming smarter and, most importantly, better able to erase our mistakes. In time, expanded memory capacity and file storage abilities led to dedicated word processors and eventually ever more sophisticated and robust word processing software built for ever more powerful personal computers.

A. Dedicated Word Processors

I remember purchasing my first dedicated word processing equipment (an integrated keyboard, processor, green monochrome monitor, and built-in software) made by Pilara in 1982. Suddenly, as a lawyer and mediator, I was able to save, edit, and retrieve entire documents. This was a game changer for me as a solo practice professional. Previously, whenever clients would want to substantially change their documents, I would cringe knowing the

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11 See id.
time it would take for me to retype multiple pages. With my new
dedicated word processing capacity, I could infinitely modify and
then print refined top-flight client documents. What a wonderful new
world, even if I was still strolling down to the mailbox to send my
refined word-processed documents every day by the five p.m. mail
pickup so that clients and other legal counsel would receive them
within three to four days. Three to four days! How crazy that now
seems!

B. Enter the PC and Mac

While my dedicated word processor was great, in time it became
clear that computers were not only ideal for word processing but for
all kinds of administrative functions. As Furth recognized in 1970,
even then computers had the prospect of assisting legal professionals
administratively, most particularly with regard to billing, calendaring,
filing, and payroll.12 My interest in taking advantage of Timeslips (a
new billing program) and Symphony (a spreadsheet program) led me
to move on from my dedicated word processing equipment—with
everything built-in, bundled, and not expandable or upgradeable—to a
new IBM PC. Word processing was no longer the exclusive purpose
of my equipment and was now mysteriously not done by the
equipment itself. Instead, something that the user was to install called
software—with new names like WordPerfect, Timeslips, and
Sidekick—did the processing. I could load capacities, or software,
into my machine and expand and update these capacities over time. I
was thrilled to find a bunch of other uses for my computer beyond
word processing and billing, including keeping my calendar, editing
pictures, desktop publishing, and, of course, playing games.

As years passed, our personal computers became ever better, faster,
more capable, more mobile, and remarkably more affordable.13
Apple’s Mac operating system introduced a graphical interface and
new control device, the mouse.14 Monitors moved from monochrome

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12 See Furth, supra note 1, at 217–18.
13 See Michio Kaku, The Future of Computing Power (Fast, Cheap, and Invisible), BIG
14 Alex Soojung-Kim Pang, Mighty Mouse, STANFORD MAG. (Mar./Apr. 2002),
http://alumni.stanford.edu/get/page/magazine/article/?article_id=37694 (“The mouse
would help revolutionize computers, making them more accessible to ordinary people.”).
green to amber to full 256 RGB color.\textsuperscript{15} With colors and fonts, users could now express emotion and design. How cool! Soon users were able to add pictures to our documents and newsletters. Software kept getting better but also more complex and bulky. I remember eagerly anticipating monumental Windows upgrades with the masses and stuffing seemingly endless WordPerfect discs into my PC to accomplish the many updates and improvements.

And so, beginning in the early 1980s, typewriters evolved into word processors, word processors evolved into personal computers, and an expanding marketplace of software offered all kinds of computerized legal practice management capacities. As law firms caught on, individual personal computers were driven not by their own isolated processors, but increasingly by a firm local area network (LAN).\textsuperscript{16} A law firm’s LAN provided massive benefits including the centralization of data, coordinated software updates, systematic file back-ups, virus protection, and a new capacity—the ability to easily e-mail and instant message within the LAN.\textsuperscript{17} This instant ability to communicate with other network members—and to send them not only messages, but also entire attached files—presaged the next game-changing development: the advent of the Internet.

II

THE SECOND DISRUPTIVE TECHNOLOGY: E-MAIL AND THE INTERNET

As visionary as Furth was, he did not anticipate the Internet, nearly the entire world connected on the same network. We are now all essentially on the same equipment. How did this all happen? The answer, I suggest, is not all at once, but rather through a series of market-driven, incremental technologic gains. There is no question

\begin{footnotesize}
\footnote{See \emph{Local Area Network and Ethernet}, AXIS COMM’NS, http://www.axis.com/products/video/about_networkvideo/ip_networks.htm (last visited Feb. 26, 2015) (“A local area network (LAN) is a group of computers that are connected together in a localized area to communicate with one another and share resources such as printers.”).}
\footnote{Joe, \emph{Local Area Network (LAN) Basic Components}, NETWORKBITS (Oct. 26, 2007), http://networkbits.net/lan-components/local-area-network-lan-basic-components/; \emph{Local Area Network Definition}, LINUX INFO. PROJECT (Sept. 13, 2005), http://www.linfo.org/lan.html; see Margaret Rouse, \emph{ISSU (In-Service Software Upgrade)}, SEARCHNETWORKING, http://searchnetworking.techtarget.com/definition/ISSU-In-Service-Software-Upgrade (last visited Mar. 26, 2015).}
\end{footnotesize}
that the Internet has changed the world, the legal profession, and each of our daily lives.

My exposure to the Internet began in March of 1988, approximately eight years before the Internet went “.com.” I had recently been hired as the executive director of the Academy of Family Mediators (AFM) and was having a difficult time effectively communicating with my dozen board members. My daily experience was one of increasing “pink-slip” phone messages and escalating frustration as it became more difficult to communicate with busy board members to move our organization and many projects forward.

It was then, in March of 1988 at the North American Peacemaking and Conflict Resolution Conference in Montreal, that I met John Helie, the person who introduced me to the Internet and the modem. John was one of the leaders of the new Berkeley Dispute Resolution Center and discovered the Internet himself when he wanted to get some computer files from the San Francisco Community Boards Program. John knew that he did not want to suffer through the traffic on the San Francisco Bay Bridge, back and forth, to get the files. With a bit of guidance, John was able to get his first modem and learned how files could be easily—almost instantly—passed over any distance via a phone line.

John became enamored with the convenience of being able to pass files and the implied ability of one program or professional to benefit another. It drove him to further pursue these new technologies with the Institute for Global Communications (IGC), and John came to form his own network, “ConflictNet,” as part of the IGC family of networks.18 ConflictNet’s original services included e-mail and bulletin board technologies on its proprietary IGC network.19 With the proprietary networks of CompuServe, Prodigy, and, in time, America Online, a user could communicate with anyone and everyone on the network.

My introduction to the Internet was momentous, another complete game changer. I came to our next board meeting with a dozen modems, network identities, and passwords for my board, and the world again changed overnight; with the single protocol that each board member would use to check his e-mail and organizational

bulletin board at least daily, I was able to greatly reduce ringing telephones and eliminate pink slips. Furthermore, not only could I silently communicate with my board (individually, with a subset, or with all), but they also could communicate and respond to both me and to one another. Perhaps best of all, there was now an archive of communications that we could use to bring other board members and new members up to speed, as well as to document board decision making and action.

Another intriguing aspect of the new ConflictNet proprietary network was that we were now able to take part in communications with other dispute resolution professionals and organizations, whether these individuals were part of AFM or not. Early on, I noted this ability to distribute and discuss information field-wide and, ultimately, this led John and me to form Resourceful Internet Solutions, Inc. in 1995 and our flagship websites, Mediate.com and Arbitrate.com.20

Between the late 1980s and early 1990s, the amount of data a computer could store (with larger and larger hard drives) and the speed at which data could move through phone lines steadily progressed. Other developments led to a richer online experience. I very distinctly remember seeing my first full-color online text communications, seeing my first transmitted picture, hearing my first online audio, and seeing and hearing my first online video. In each case, I responded with, “this changes everything.” And, in retrospect, I was right each and every time.

Even during the early, clunky times—with screechy modems, attachments that did not always work, and a painfully slow Internet—it was clear that technology would evolve and improve. It was plain that, in time, anyone would be able to communicate with any other individual on the earth and do so by text, image, audio, or video, either in real time (synchronously) or asynchronously. In this incremental way, our online communicational palate formed and evolved. We no longer walk down to the mailbox at the end of each day or receive communications three or four days later. Our legal filings are now generally done online, and our professional communications are now often instantaneous.21 With the Internet, we

are all now essentially on the same computer. And, remarkably, that equipment now fits in our pocket or purse.

III
THE THIRD DISRUPTIVE TECHNOLOGY: PERSONAL MOBILE DEVICES

There was a time, a time not too long ago, when telephones were just telephones and computers were just computers. Now, computers and telephones have not only merged, but smartphones are available in just about every shape, size, and color and are continuing to miniaturize into such devices as eyeglasses and watches.22 How far we have come from typewriters, carbon paper, and the U.S. mail! And it is not just our computers and telephones that have merged and gone mobile. These same smartphone devices now commonly include all of our contacts, calendars, instant messaging, video cameras, still cameras, video and photo collections, music collections, GPS guidance, real-time tracking of our investments, real-time weather, alarm clocks, calculators, and timers while also acting as our bookstore, music store, access to social media, and more. The game changer here, on the heels of the first disruptive technologies of word processing and the personal computer and the second disruptive technology of the Internet, is that everything is personal and mobile.

When I first started practicing, people communicated to a place rather than to a person. We would send mail to a physical address and be sure to carefully address our correspondence to ensure that the right person would, hopefully, open the envelope—although we never really knew for sure. When we would call, it was generally to a place, and we would be professionally wary of leaving too much information as part of a recorded message on the family message machine. Similar to other developments, voicemail has now moved from being a machine or piece of equipment (that Furth could identify with), to a mysterious ability that just happens. Whereas our voice message recorder used to be an important equipment purchase for the family home, voicemail has now been personalized, with a separate messaging system for each family member, and it has been removed from the physical location of the home or business to wherever we are. We are now the equipment’s location.

Increases in cell phone bandwidth, the ubiquity of wireless networks, and improvements in overall system capacity and speed underlie our move to personalized mobile communications. One result is that professional communications now take place across a variety of modalities. In the old world, we might have exchanged correspondence and enclosed a proposed draft for legal counsel to review and reply within a week or two. In the new world, we might send a text message referencing and utilizing multiple modalities of communication. Our text might read: “Just sent you a new draft by e-mail with attachment, track changes on. Please edit, send back, and call to discuss. In time, let’s send PDF to clients for consideration during Skype meeting.”

Legal work has thus become a strategic choreography of client and collegial communications across modalities. It would be a mistake to think that legal professionals are the primary drivers of these changes. Rather, lawyers are more commonly playing catch-up to evolving marketplace and consumer expectations. Consumers now expect full information about legal services online. They expect to be able to schedule an appointment online. They increasingly expect that valuable legal resources will be available for their own use online (LegalZoom) and, increasingly, they are looking for immediate, or near immediate, legal services (Rocket Lawyer and UpCounsel). And they expect this all via their smartphones.

Marketplace pressures that washed through many industries, creating dramatic new efficiencies, are now gaining strength and washing through the legal industry. Historic legal industry inefficiencies and entitlements are now rapidly giving way to new expectations of “can’t we just do that (more affordably and efficiently) online?” As online communications become ever better and more affordable, and as we become increasingly savvy as professionals choreographing our communications, physical meetings themselves will become increasingly rare. The ease and affordability of working online is improving every day. It does not take a rocket scientist to advise the legal industry to embrace technologic change or be left behind.

25 Travel and financial management are two such industries in which marketplace pressure has created dramatic new efficiencies.
Perhaps the leading proponent pushing the legal industry to stand up and fully take note of technical innovations and marketplace expectations is Richard Susskind, author of *The End of Lawyers? Rethinking the Nature of Legal Services*\(^{26}\) and *Tomorrow’s Lawyers: An Introduction to Your Future*.\(^{27}\) In both works, Susskind asks lawyers to examine what elements of their current workload could be undertaken differently—more quickly, cheaply, efficiently, or to a higher quality—using alternative methods of working.

In the more recent book, *Tomorrow’s Lawyers*, Susskind analyzes four main pressures lawyers now face: to charge less, to work differently, to embrace technology, and to deregulate.\(^{28}\) He argues that the market is increasingly unlikely to tolerate expensive lawyers for tasks—such as guiding, advising, drafting, researching, problem-solving, and more—that can be equally or better discharged directly or indirectly by smart systems and processes.\(^{29}\) It follows, Susskind claims, that the jobs of many traditional lawyers will be substantially eroded and often eliminated.\(^{30}\) Further, Susskind sees an eye-opening legal world of virtual courts, Internet-based global legal businesses, online document production, commoditized services, legal process outsourcing, and web-based simulated practice.\(^{31}\) Legal markets will be, in Susskind’s mind, “liberalized.”\(^{32}\)

### IV

THE FOURTH DISRUPTIVE TECHNOLOGY: THE CLOUD

The fourth disruptive technology is the cloud. For anyone who wants to know my prediction for the future of technology in the legal industry, it is a one-word answer: cloudy.

What do we mean by the cloud? For starters, it is not a real cloud; it is not nearly so much “up there” as it is “out there.” The cloud is really a network of data centers that take responsibility for doing two things: (1) running the cloud applications, or environments, which are the interfaces through which you communicate; and (2) holding your

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27 RICHARD SUSSKIND, TOMORROW’S LAWYERS: AN INTRODUCTION TO YOUR FUTURE (2013).
28 Id. at 3, 29.
29 Id. at 109.
30 Id.
31 Id. at 23, 55–56, 99, 125, 129, 145–46.
32 Id. at 6.
personal data (and accepting responsibility for reliable access to and backing up your data).  

The cloud became desirable for me largely due to the ease and dramatic time and cost savings afforded by simply downloading new software, music, and videos. Software is now so thoroughly sold and downloaded online that few stores carry software for purchase, and many computers no longer have optical (CD and DVD) drives for loading software, music, or movies. In addition to being able to order and download, one of the primary advantages of cloud-based software is that automated bug fixes and updates are automatically provided to all users. In the old days, bug fixes and improvements required purchasing an update and then stuffing all of those disks into your computer. Now, updates just happen in the background of your computing experience.

There is an understandable degree of trepidation about relying on cloud-based providers to store personal and professional data. These concerns are elevated when one reads of large enterprise data breaches and the NSA’s access to our information. Plainly, there is much work to be done in optimally resolving issues of reliability, security, and privacy, but it is worth perhaps also noting that the old ways were far from perfect in these regards. How good are your back-up systems? Have you ever spilled coffee on your laptop? For example, for approximately fifteen years, our business ran its own server shop. I lost sleep fearing physical break-ins, an electrical outage, a flood, or any number of other calamities that might take us offline. About five years ago, we moved our entire operations to AWS Cloud Services, and I no longer lose sleep wondering if we will go down. I know that with advances in technology, our entire business is backed up hourly, daily, weekly, and monthly; should
there be a calamity, our entire operation would be shifted to another redundant system.

From a development perspective, working in the cloud is, if you will, a dream. As our cloud-based company comes up with bug fixes, updates, and new services, we are able to instantly and uniformly populate our entire system with all of the new and best programming. This is enormously liberating because it allows online capacities to steadily evolve and improve. There no longer is a need to order updates. Like back-ups, they now just happen.

CONCLUSION

The world has surely changed since Steven Furth wrote *Computer Uses in the Law Office*. With his background at IBM, Furth was understandably focused on the development of new equipment technologies of the day. Furth does not seem to have appreciated the coming revolutions in operating systems development, applications development, and connectivity. Seemingly, software in 1970 was viewed as fully integrated with hardware to create smart equipment.

Certainly, Furth does not seem to have anticipated the Internet or how society would be so effectively tied together by e-mail and the web. Nor, understandably, does it seem that Furth anticipated the move to wireless networks, cellular broadband, or the ridiculous degree of device choice and mobility. Because we want to access all of our online resources from anywhere at any time on any device, it is clear that both our software and data will necessarily be housed in the cloud to allow access across devices and locations.

With the technologic advances over recent decades and their remarkable acceleration, it is clear that the legal profession needs to play a bit of catch-up by asking ourselves how can we best utilize all available communication capacities to elevate and expand the delivery of valuable legal information, advice, and services. Dream big! The future is not what it once seemed.
Comment

ALEC HANKINS*

Closing Thoughts: Fear and Loathing of Lost Wages—Experiences as a Law Student and Disruptive Legal Technologist

INTRODUCTION

During this time of year, most third-year law students are busy working away at their externships, clamoring to find post-graduation jobs and clerkships, and nervously counting down the days until the bar exam. But a hardy few are pursuing alternative paths in the face of terrifying uncertainty and, occasionally, staunch

INTRODUCTION

During this time of year, most third-year law students are busy working away at their externships, clamoring to find post-graduation jobs and clerkships, and nervously counting down the days until the bar exam. But a hardy few are pursuing alternative paths in the face of terrifying uncertainty and, occasionally, staunch

* Founder and chief executive officer, Lawger.com; B.A., economics, California State University San Marcos; J.D. candidate 2015, University of Oregon School of Law; operations editor, Oregon Law Review 2014-15. Thank you to my fiancé Hayley for supporting me during this weird and wonderful period in our lives.
opposition. I am proud to say that I am one of the people on the fringe exploring and developing solutions at the nexus of law and technology—pushing the law to work better, smarter, and more efficiently for everyone.

From the Duodecim Tabulae of the Roman Empire to the United States Constitution, the practice of law is a tradition that spans many millennia and, at its best, outshines every other profession in terms of impact on our culture. It is a craft that can never be truly mastered because the law is really only a momentary consensus—people change, ideas change, needs change. But while lawyers are completely used to changing our laws though adjudication and statutes, changing the way we practice law is something much more complicated.

Lawyers are now at a junction in which it is necessary to change how they practice law in order to stay relevant and effective. Changing how legal services are provided often frightens lawyers because any potential change could potentially change their livelihoods. But although lawyers’ income streams may restructure and diversify in the near future, it does not necessarily follow that these changes mean someone else will be eating your lunch. Quite to the contrary, the impetus for this change is the ninety billion dollars worth of lunches that are going to waste inside the legal access gap each year.1 I built Lawger as a tool to increase the efficiency of the legal services market so that clients trapped without legal representation could connect with lawyers who are willing and able to help them.

I

PRINTING PRESSES IN A WORLD GONE PAPERLESS

It is clear now that legal practice is due for a truly disruptive shift. Maintaining the status quo, despite our knowledge of the staggering legal access gap2 and the existing technological possibilities at our fingertips is nothing less than culpable behavior. And yet, we


2 At least eighty percent of the civil legal needs of low-income Americans are not being met. Ninety-nine percent of housing eviction defendants are unrepresented in jurisdictions measured by a Legal Services Corporation report. LEGAL SERVS. CORP., DOCUMENTING THE JUSTICE GAP IN AMERICA, at Preface (2005), available at http://www.lsc.gov/sites/default/files/LSC/images/justicegap.pdf.
continue to defend, or at least fail to mobilize, changes necessary to resolve these issues for systemic, and largely self-interested, reasons.3

A. How We Got Here

Until 1975, lawyers were ethically required by their state bars to charge above-market prices.4 And despite the changes that ended price collusion, legal practice went on largely unchanged, and lawyers continued to enjoy long periods of undisturbed prosperity. In fact, throughout the 1980s, 1990s, and early 2000s, the demand for top-talent attorneys was so high that Big Law firms likened hiring new associates working billable legal matters to “owning a printing press.”5 Following the Great Recession, however, clients and law firms started tightening their belts, and thousands of attorneys were left un- and underemployed.6 To make matters worse, a seemingly endless stream of bad news clouded over America’s legal institutions; law school applications plummeted, and lawyer unemployment continued to soar.7 A punctuated equilibrium occurred—lawyers

3 See Everett M. Rogers, Diffusion of Innovations 11 (5th ed. 2003) (discussing the process by which an innovation is adopted by individuals in a social system over time). There is no reliable data on technology adoption rates in the legal industry, but commentators note the risk of being an “early adopter” of new technology. Adoption rates in areas such as e-discovery show the unwillingness of the legal industry to utilize new technology early on. Marty Smith, Malpractice, Bell Curves and Innovation. . ., LEGALREFRESH (Apr. 15, 2014), http://legalrefresh.com/legal-malpractice-bell-curves-and-innovation/.


would either have to adapt in the face of change or go extinct, or at least find a new job.

The positive outcome for the legal industry is that when the Great Recession turned the microscope on traditional legal practice, some lawyers and law students started prodding at the weak points by building tools to make legal research and case management more efficient. Others began rethinking the pricing schemes and structures in law firms. Others realized that the problems in the legal market are not only caused by high prices but also by inherent failures in the current methods of legal services delivery. I founded Lawger with this notion in mind—thinking outside the law firm model completely and imagining vertical marketplaces in which legal help can be bought, sold, and completely performed remotely in a setting that is focused on client empowerment.

B. The Struggle Is Real

There is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new order of things. Whenever [] enemies have the ability to attack the innovator, they do so with the passion of partisans, while others defend him sluggishly, so that the innovator and his party alike are vulnerable.

— Niccolò Machiavelli

The bad news for legal innovators is that the legal industry is structured to curb innovation. Similar to Galileo Galilei—who was convicted of heresy for challenging Pope Urban VIII and the Bible

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11 James Podgers, Part of Access to Justice Gap Is That Americans Don’t Know When to Seek Legal Help, Says Study, ABA J. (Aug. 8, 2014, 6:28 PM), http://www.abajournal.com/news/article/part_of_access_to_justice_gap_is_that_americans_dont_know_when_to_seek_lega (explaining that prices are only a single factor in the legal access gap, and that a larger problem is the lack of understanding of legal issues and the unavailability of legal guidance).

12 ROGERS, supra note 3, at 1 (citing NICCOLÓ MACHIAVELLI, THE PRINCE (1513)).
with his theory of heliocentrism—legal innovators are accused of violating the Model Rules of Professional Conduct for challenging some of its more antiquated and unclear rules. Rule 5.4(a), which bars “fee-splitting,”14 and Rule 5.5, which bars the unauthorized practice of law,15 are particularly outdated in many respects. Because of the lack of clarity in the rules, a lawyer could ostensibly be disciplined for accepting credit cards and using automated client intake forms.16 Unfortunately, the only way to clear up the confusion in the rules is for lawyers to be accused of breaking them, or for individuals and businesses to face criminal sanctions for venturing into unknown territory. Some jurisdictions allow lawyers, but not nonlawyers, to request a committee opinion from the state bar; however, these are based on hypothetical fact patterns and are often not challengeable.17 Because the regulatory scheme is so difficult to navigate, especially for nonlawyer entities, innovation in the legal space has lagged noticeably behind. But now that the need for legal innovation has reached a boiling point, innovators are pushing the boundaries of the antiquated rules. The ethics laws are intentionally designed to curb innovators from challenging the status quo of legal practice. “And yet,” as Galileo said, “it moves.”18

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14 MODEL RULES OF PROF’L CONDUCT R. 5.4(a).
15 MODEL RULES OF PROF’L CONDUCT R. 5.5.
16 To accept credit cards, lawyers must have a merchant account or a similar solution. Both the merchant service and the credit card company collects a percentage fee of the transaction, which could be construed as unauthorized fee-splitting under Rule 5.4(a). The ABA issued a formal opinion authorizing the use of credit cards in the 1970s under some circumstances, but it is unclear whether other common transaction fees—such as service fees, which are common for online businesses—would violate Rule 5.4(a). See ABA Comm. on Ethics & Prof’l Responsibility, Formal Op. No. 00-419 (2000) (reiterating that credit cards may be used to pay for legal services); South Carolina Bar Ethics Advisory Comm., Ethics Advisory Op. 11-05, 2011 WL 7657361 (2011) (allowing fee payments for daily-deal websites like Groupon).
17 See, e.g., OREGON STATE BAR BYLAWS, art. 19, §§ 19.102, 19.300 (2014), available at https://www.osbar.org/docs/rulesregs/bylaws.pdf (describing that communications with general counsel’s office are not confidential, and opinions from the legal ethics committee are final).
18 Eppur Si Muove, MERRIAM-WEBSTER DICTIONARY, http://www.merriam-webster.com/dictionary/eppur%20si%20muove (last visited Mar. 28, 2015). Galileo is credited with uttering the phrase “eppur si muove” after being forced to recant his claims that the earth moved around the sun.
II
OLD SOLUTIONS FOR NEW PROBLEMS

A. Inefficiencies and Externalities

My start-up, Lawger, is crafted around the same market-based system that has been used to sell grain and tulips for hundreds of years and has been proven many times over in modern industries like software and design. The model is the standard taught in economics courses worldwide as the ideal manner of allocating resources, yet it fundamentally changes the way people will solicit and render legal services.19

Lawger recognizes that the legal services market is awash with market failures that are remnants of a period when alternative market structures were both unneeded and infeasible. But as our society and economy have evolved, the shortcomings of the traditional model have become more obvious. The widening legal access gap in the middle class is the most serious externality of the traditional legal model,20 and it was the impetus for me to build Lawger. It is a tragically unrecognized human rights crisis that effectively awards those rich enough to afford an attorney the power to shape the law. If only certain people can have their day in court, only certain interpretations of the law become precedent. It is startling to think that today, more than half of middle-class Americans have one or more legal issues in their lives, but cannot find a lawyer to help them.21 And the problem is even more perplexing considering the loud accusations by the media and cynics that there is an oversupply of lawyers in America.22


20 See generally George C. Harris & Derek F. Foran, The Ethics of Middle-Class Access to Legal Services and What We Can Learn from the Medical Profession’s Shift to a Corporate Paradigm, 70 FORDHAM L. REV. 775 (2001).


22 Steven J. Harper, America Has Way Too Many Lawyers, and the Bubble is Growing, BUS. INSIDER (July 30, 2013, 9:55 AM), http://www.businessinsider.com/americahas-way-too-many-lawyers-and-the-bubble-is-growing-2013-7 (“If law schools as a group reduced enrollments by 20 percent from last year’s graduating class, they would still produce almost 37,000 new lawyers annually—370,000 for a decade requiring only 235,000—not to mention the current backlog that began accumulating even before the Great Recession began.”).
B. Putting It All Together

From an economic perspective, this phenomenon—a massive pool of underserved clients on one hand, and swaths of unemployed lawyers who are willing and able to help those clients on the other—can be explained by the enormous transaction costs necessary for these parties to find one another. It is simply too costly in terms of time, effort, and expense for middle-class Americans to find the right lawyer at the right price. To draw the current lawyer-hiring situation to an absurd analogy, imagine if calling a cab was like hiring a lawyer: you have to call drivers one-by-one, and each driver has wildly different prices, quality, and professional experience. Some drive pedicabs, and others drive charter buses, and it is difficult to tell which is which. From that perspective, it is easy to see why consumers are befuddled by hiring a lawyer and are unable or unwilling to get legal help.23 It should be revealing that even the minimally inconvenient process of hailing a cab has been completely disrupted by start-ups like Uber and Lyft.24

In the spirit of the “on-demand economy”—accentuated by start-ups that aggregate, organize, and connect independent participants in vertical market sectors to increase efficiency and user experience—Lawger is operating at the nexus of law and technology to make legal help a convenient and pleasant experience for modern consumers. I started Lawger with the uncompromising belief that lawyering should, at its heart, be designed to serve clients in the best way possible. There is no good reason why lawyers could not—or should not—adopt more efficient processes to match clients to lawyers wherever possible. I designed Lawger to achieve this goal by putting clients in the driver’s seat: turning the client origination process into a reverse auction in which cases are the prize, and the client chooses the winner. We help clients build a brief of their issue, and they set a price range they are willing and able to pay. Qualified lawyers are then invited to bid on the cases, and as the bids roll in, the clients can

23 See Nathan Koppel, More Strapped Litigants Skip Lawyers in Court, WALL ST. J. (July 22, 2010, 12:01 AM), http://www.wsj.com/articles/SB10001424052748704229004575371341507943822 (describing how ordinary people are forced to represent themselves pro se because lawyers are too expensive, and litigants lack awareness about hiring lawyers, seeking legal aid, and representing themselves competently).

objectively consider each candidate based on their price and experience. Essentially, Lawger aggregates pools of common legal issues and acts as an escrow account so that the lawyer is assured that the client is able to pay, and the client is assured the job will be completed sufficiently prior to payment.

This bidding process preserves client autonomy and makes it easy for them to find the right attorney at competitive market rates. It also allows lawyers to find prepaid clients easier than ever. It cuts down marketing costs, it enables attorneys to work as much or as little as they choose, and it unlocks a market segment worth at least $2.2 billion per year for Lawger and many more billions for lawyers everywhere. It is an idea that could truly revolutionize the industry—if it works, that is.

C. Pushing Forward into the Unknown

The risk of failure, of course, is the sine qua non of entrepreneurship. Everyone’s heart flutters at the prospect of being wildly successful, but few are willing to take the jump and assume a big risk. Lawyers are particularly deterred from innovating because attorneys rely so heavily on their reputations—no one wants to be “that person” who crashes and burns in the public eye. It is arguably even riskier as a law student, because you are placing your credibility at risk even before your career has started. But for me, building a super efficient, super productive legal system is worth every risk. Even if Lawger fails, the experience alone is worth the price of admission.

Precisely describing the experience of founding a disruptive legal start-up in law school is a challenging task. On one hand, it is all the things you would expect: the late nights, the bloodshot eyes, the frantic briefing of cases before class, and the near-toxic level of caffeine in your bloodstream. On the other hand, the feeling is entirely unexpected. It is the transformative, empowering, and frightening experience of creating something for an important purpose and holding your future in your own hands. It stirs emotions that you never could have anticipated. It is the absolute highest-highs and the lowest-lows.

I built the prototype for Lawger during the fall semester of my third year at the University of Oregon School of Law for less than one thousand dollars, but now it is so much more than that. It is an extension of me, and it is a reflection of my thoughts and actions, albeit an imperfect one. If you have been truly engulfed in your work,
you know the exact feeling—you are utterly obsessed with it, but nothing is ever quite good enough; nothing is ever going as well as you would like it to. You love it, and sometimes you hate it.

The stress can only be described as incredible. Maybe the best way to describe what it feels like to be taking on law school and founding a start-up is to imagine you are drowning—and then someone hands you a baby.25 Surprises come in the most unexpected places and at the most inopportune times. Papers are due, files are lost, components break, coffee is spilled, people abuse you, and yet, you inch closer.

Legal start-ups may have it worse because, at the end of the day, there are cynical lawyers at every turn. Unlike regular start-ups, legal start-up founders—in addition to having to muster up the courage to bare their intellectual fiber before the public—also need the wherewithal to do it in front of attorneys. Needless to say, it is a mixed blessing. On one hand, you often get articulate and constructive feedback from intelligent people with specialized expertise; on the other hand, you endure attorneys saying things like “what a joke,” “this will never work,” “do yourself a favor and do something else,” and “people much smarter than you have tried to change these things for one hundred years and failed miserably.”26 I have to remind myself to take everything with a grain of salt, especially when dealing with systems that may affect lawyers’ wages. Perhaps not so coincidentally, all of those comments came from successful attorneys who are equity partners in successful firms or have exited into lucrative alternative careers and have no interest in changing. I have to remind myself that I am not building a product for them—I am building it for the millions of people who can’t find lawyers and the many qualified lawyers who are underemployed.

CONCLUSION

Ultimately, it is important for entrepreneurs in the legal space to never lose sight of what it is all about: making the legal system work better. No matter if an attorney is hanging his or her own shingle, writing software, or drafting legislation, the purpose of innovating is to better serve people, to make the law more equitable, and to make

25 See generally Jim Gaffigan: Mr. Universe–4 KIDS, YOUTUBE (Oct. 9, 2012), https://www.youtube.com/watch?v=GEBzrYOG9PI.

26 Each of these comments has been said to me in meetings with lawyers and lawyer-investors.
our society a better functioning body. If you are driven by these purposes, there is no risk of failure—every bit of effort expended to accomplish these goals amounts to something, if only sparking one thought in a single person’s mind, for only a moment. If we are all collectively working toward these goals in the face of failure, abuse, and embarrassment, the law—and legal practice as a profession—can only stand to gain.