

## ***Lola v. Skadden* and the Automation of the Legal Profession**

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*Technological innovation has accelerated at an exponential pace in the last few decades, ushering in an era of unprecedented advancements in algorithms and artificial intelligence technologies. Traditionally, the legal field has protected itself from technological disruptions by maintaining a professional monopoly over legal work and limiting the “practice of law” to only those who are licensed.*

*This article analyzes the long-term impact of the Second Circuit’s opinion in *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, 620 F. App’x 37 (2d Cir. 2015), on the legal field’s existing monopoly over the “practice of law.” In *Lola*, the Second Circuit underscored that “tasks that could otherwise be performed entirely by a machine” could not be said to fall under the “practice of law.” By distinguishing between mechanistic tasks and legal tasks, the Second Circuit repudiated the legal field’s oft-cited appeals to tradition insisting that tasks fall under the “practice of law” because they have always fallen under the practice of law.*

*The broader implications of this decision are threefold: (1) as machines evolve, they will encroach on and limit the tasks considered to be the “practice of law”; (2) mechanistic tasks removed from the “practice of law” may no longer be regulated by professional rules governing the legal field; and (3) to survive the rise of technology in the legal field, lawyers will need to adapt to a new “practice of law” in which they will act as innovators, purveyors of judgment and wisdom, and guardians of fairness, impartiality, and accountability within the law.*

*The article proceeds by first discussing the procedural history and decision in *Lola v. Skadden*. It then explains the technological advances that will impact the legal field and the tools*

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*used by the legal field to perpetuate its self-regulating monopoly. The article then turns to the socioeconomic implications of technological disruption within the legal field and concludes with a discussion on how lawyers may prepare themselves for, and thrive within, an inevitably automated future.*

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## INTRODUCTION

As technology begins to guide and govern our everyday interactions, the writing on the wall becomes more emphatic: artificial intelligence technologies are becoming more advanced and affordable, and are well on their way toward replacing workers with machines. In the past decade alone, automation has largely rendered assembly line workers, stockbrokers, travel agencies, and even game-show contestants obsolete. The collection and availability of Big Data, combined with advances in natural language processing, have revolutionized the predictive abilities of algorithms, allowing for driverless cars and deep insights into the needs of consumers.

Technology's entanglement with human lives will not stop there. Technological advances will also usher in a new era of legal services, among others. Soon, practitioners will rely on algorithms to accomplish time-consuming tasks frequently given to low-level attorneys, such as sifting through client documents for relevant information and insights. The question is how—and when—machines will enter the legal economy in full force and render lawyers obsolete.

Until recently, the answer was that the legal profession would protect itself from the threat of automation by maintaining a professional monopoly over legal work. The American Bar Association (ABA) has backed state statutes preventing the unauthorized practice of law by those who are not barred.<sup>2</sup> Further, ABA Professional Rule 5.4 prohibits any ownership interest in law firms by non-lawyers.<sup>3</sup> As a result, lawyers have effectively prevented machines from “practicing law” and have precluded non-lawyer investment in the “practice of law.” The lawyers' consensus has been that a lawyer's labor is different. No lawyer-enacted stricture exemplifies this attitude more clearly than the Federal Labor Standards Act (FLSA), which specifically exempts those who engage in the “practice of law” from claiming overtime payment.<sup>4</sup>

Enter David Lola, a former contract attorney whose actions have inadvertently nudged open the floodgates to automation within the legal profession. Lola simply sought overtime pay under the FLSA from a well-respected law firm for the grueling and repetitive task of reviewing thousands of documents.<sup>5</sup> Lola has—entirely by accident—become responsible for a watershed

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<sup>2</sup> MODEL RULES OF PROF'L CONDUCT r. 5.5 (AM. BAR ASS'N 2016).

<sup>3</sup> *Id.* r. 5.4.

<sup>4</sup> *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 13-CV-5008 RJS, 2014 WL 4626228, at \*1 (S.D.N.Y. Sept. 16, 2014), *vacated and remanded*, 620 F. App'x 37 (2d Cir. 2015).

<sup>5</sup> *Id.*

moment that will allow for technological disruption in the legal field: a declaration by the Second Circuit of Appeals that, under the FLSA, “an individual who . . . undertakes tasks that could otherwise be performed entirely by a machine cannot be said to engage in the practice of law” and a recognition by the Second Circuit that the lawyer’s task of document review may well fall under that category.<sup>6</sup> In doing so, the *Lola* court became the first to consider whether machine-led tasks must be carved out of the “practice of law.”

The purpose of this Article is to understand the profound implications and effects of the Second Circuit’s *Lola* ruling for the legal field. *Lola*’s distinction between the “practice of law” and tasks “that could otherwise be performed entirely by a machine” creates a space within the legal field for advanced algorithms, and raises questions regarding a lawyer’s role when human- and machine-led tasks become indistinguishable. Computers are now capable of processing, analyzing, and drawing predictions from vast swaths of data—precisely the type of work tasked to many junior and mid-level associates at law firms. How can the legal field survive the oncoming seismic shift in responsibilities? Will low-level lawyers be largely out of a job? And will law firms lose their competitive edge to alternative legal-service providers, due in part to firms’ delayed responses to changes in technology?

Part I of this Article will examine the facts and claims of *Lola v. Skadden*, including the decision of the Southern District of New York to dismiss the action and the decision of the Second Circuit Court of Appeals reversing that dismissal. Part II will discuss advances in artificial intelligence and its application to legal work, which suggest that, despite previous similar warnings that technology will eliminate workers, current circumstances are different. Part III focuses on the factors within the legal profession that cause it to seek equilibrium in the status quo and resist change. Part IV examines *Lola*’s disruption to this equilibrium and the long-term implications of artificial intelligence (or “AI”) in the legal profession. The final section, Part V, will offer concluding thoughts for lawyers who wish to avoid obsolescence.

## I. DAVID’S SLING HITS THE MARK: *LOLA V. SKADDEN*

### A. Introduction

In the legal industry—rightly or wrongly—few if any jobs are less prestigious, less interesting, less remunerative, less likely to lead to “real” work, and hence more reviled than the job of the

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<sup>6</sup> *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, 620 F. App’x 37, 45 (2d Cir. 2015).

temporary document reviewer. Consider an example narrated by The New York Times: “One law school graduate who said he did not want to draw attention to his lack of permanent employment said he was ‘doing rote legal temp work on the side to pay rent . . . I dare not put it on my résumé because it makes you instantly nonprestigious and unemployable . . . .’”<sup>7</sup> The dead-end dreariness of contract document review has garnered attention, sympathy, and cynicism from the legal press, including popular young-lawyer bullhorns such as *Above the Law*, *JDUnderground*, *The Lawyerist*, *The Posse List*, and many other outlets seemingly dedicated to an almost unrelenting hatred of the job by those who find themselves so employed.

But not all the aggrieved are willing to suffer in silence or complain in anonymous blog posts; some sue. On July 18, 2013, document review contract attorney David Lola filed a complaint in the United States District Court for the Southern District of New York against the law firm Skadden, Arps, Meagher, Slate & Flom LLP (“Skadden”) and the service provider Tower Legal Staffing (“Tower”).<sup>8</sup> Lola sought overtime wages under the FLSA.<sup>9</sup> Lola’s case, like similar contract attorney FLSA cases, was disposed of by the district court quickly, efficiently, and with little doubt, as the Department of Labor regulations for the FLSA specifically exempt those who practice law from entitlement or claims to overtime.<sup>10</sup> Lola appealed and, astonishingly for such a small case, the Second Circuit Court of Appeals embraced the appeal and scheduled oral argument. But that was just the beginning, and the least, of the surprises.

### ***B. Facts and Claims***

When David Lola sued his former employers for overtime pay, no one could have guessed that his lawsuit would soon threaten to change the legal landscape. The claim seemed like another doomed overtime action against a Goliath-like

<sup>7</sup> Elizabeth Olson, *Burdened with Debt, Law School Graduates Struggle in Job Market*, N.Y. TIMES, (Apr. 26, 2015) <http://www.nytimes.com/2015/04/27/business/dealbook/burdened-with-debt-law-school-graduates-struggle-in-job-market.html> [http://perma.cc/E9EX-8YQ7].

<sup>8</sup> Complaint, *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 13-cv-5008 (RJS) (S.D.N.Y. July 18, 2013). The complaint was amended on October 3, 2013. See First Amended Complaint, *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 13-cv-5008 (RJS) (S.D.N.Y. Oct. 3, 2013), 2013 WL 11109489.

<sup>9</sup> *Lola*, 2014 WL 4626228, at \*1.

<sup>10</sup> *Id.* at \*14; see also 29 C.F.R. § 541.304 (2018) (“The requirements of § 541.300 and subpart G (salary requirements) of this part do not apply to” any “employee who is the holder of a valid license or certificate permitting the practice of law or medicine or any of their branches and is actually engaged in the practice thereof.”).

international law firm, but the stone from this David's sling reached its mark.

Lola was a licensed attorney in California.<sup>11</sup> In April 2012, he began working through Tower at Skadden in North Carolina.<sup>12</sup> Lola worked as a contract attorney on a fifteen-month document review for a multi-district litigation pending in the United States District Court for the Northern District of Ohio.<sup>13</sup> Lola had moved to North Carolina before starting the review, but was not admitted to that state's bar.<sup>14</sup> North Carolina permits attorneys licensed in other states to provide legal services under "certain limited circumstances."<sup>15</sup> For this project, Skadden paid Lola twenty-five dollars per hour<sup>16</sup> and Lola worked forty-five to fifty-five hours per week.<sup>17</sup> When he worked overtime in excess of forty hours per week, he was paid at the same hourly rate.<sup>18</sup>

On July 18, 2013, Lola filed a complaint against both Skadden and Tower in the United States District Court for the Southern District of New York under the FLSA, 29 U.S.C. §§ 201-219.<sup>19</sup> He specifically sought one and one-half time wages for the overtime work he completed in excess of forty hours per week.<sup>20</sup> Lola also filed for a putative class action under section 216(b).<sup>21</sup> Lola claimed his work was "closely supervised" by the defendants.<sup>22</sup> He further alleged that his work was limited to: "(a) looking at documents to see what search terms, if any, appeared . . . , (b) marking those documents into the categories predetermined by Defendants, and (c) at times drawing black boxes to redact portions of certain documents based on specific protocols that Defendants provided."<sup>23</sup>

Lola claimed that Skadden provided the documents to review and that most had already been "pre-marked" by the software system.<sup>24</sup> The legal review software system (Relativity) used a form of "predictive coding" or "technology assisted review" to pre-mark most of the documents.<sup>25</sup>

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<sup>11</sup> See *Lola*, 620 F. App'x at 39.

<sup>12</sup> See *id.*

<sup>13</sup> See *id.*

<sup>14</sup> See *Lola*, 2014 WL 4626228, at \*1.

<sup>15</sup> See *id.* (citing 27 N.C. ADMIN. CODE 5.5(c) (2016)).

<sup>16</sup> See *Lola*, 620 F. App'x at 40; see also *Lola*, 2014 WL 4626228, at \*1.

<sup>17</sup> See *Lola*, 620 F. App'x at 40; see also *Lola*, 2014 WL 4626228, at \*1.

<sup>18</sup> See *Lola*, 620 F. App'x at 40.

<sup>19</sup> See Complaint, *supra* note 8.

<sup>20</sup> See *id.* at \*3.

<sup>21</sup> See *id.*

<sup>22</sup> *Lola*, 620 F. App'x at 40; see also Complaint, *supra* note 8, at \*4-5.

<sup>23</sup> See Complaint, *supra* note 8, ¶ 26.

<sup>24</sup> *Id.* ¶ 25.

<sup>25</sup> See *Advanced Analytics Applications*, STRATEGIC LEGAL SOLUTIONS, <http://www.strategiclegal.com/services/advanced-analytics-application/> [<http://perma.cc/VT77-QLEV>].

At their essence, Lola's tasks were quintessentially representative of the fundamental command-and-control procedures that govern most, if not all, large-scale document-review projects. Specifically, "Defendants provided Plaintiff with extremely detailed protocols to follow if and when certain terms appeared or did not appear in each document, and Plaintiff was not required or allowed to exercise any independent judgment in carrying out these protocols."<sup>26</sup> Lola explained that he "was told exactly what terms to look for in these documents, and the nature of his work required no legal analysis whatsoever."<sup>27</sup> Lola, however, went so far as to describe his work as "exploitation":

The legal-services industry has for years been exploiting individuals with law degrees looking for short-term work by hiring them for document review projects that do not in any way resemble the practice of law . . . . To justify this exploitative practice, the legal industry insists that because these individuals have law degrees, they are performing high level work a [sic] nature that is exempt under the FLSA.<sup>28</sup>

In response to Lola's complaint, the defendants filed a motion to dismiss in the district court. The issue before the court became whether Lola was "engaged in the practice of law" while doing document review and, therefore, exempt from the FLSA.<sup>29</sup> The FLSA specifically exempts overtime employees "employed in a bona fide . . . professional capacity" under section 213(a)(1).<sup>30</sup>

At the pre-motion hearing, the core arguments centered on whether rote work could be considered "the practice of law." Defendants' counsel appealed to tradition, arguing that the type of document review in which Lola was engaged "is what many first and second-year attorneys do in a number of firms who we would say are engaged in the practice of law."<sup>31</sup> Lola's counsel

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<sup>26</sup> Complaint, *supra* note 8, ¶ 27.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.* ¶¶ 20-21.

<sup>29</sup> See *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 13-CV-5008 RJS, 2014 WL 4626228, at \*1 (S.D.N.Y. Sept. 16, 2014), *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, 620 F. App'x 37, 39 (2d Cir. 2015).

<sup>30</sup> 29 U.S.C. § 213(a)(1) (2018). The courts treat these exemptions as affirmative defenses. See *Employment Law—Legal Profession—Second Circuit Holds that Document Review Is Not Per Se Practice of Law Under the FLSA—Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 14-3845-cv, 2015 WL 4476828 (2d Cir. July 23, 2015), 129 HARV. L. REV. 843 (2016).

<sup>31</sup> Transcript of Conference Proceedings at 5, *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 13-CV-5008 (S.D.N.Y. Oct. 31, 2013) (No. 30).

instead focused on the judgment required in Lola’s job.<sup>32</sup> From the outset, the court seemed to side with the defendants, noting that the work Lola did “sound[ed] like the practice of law, even if it’s not the most glamorous and exciting aspects of the practice of law.”<sup>33</sup>

At the subsequent hearing on the motion to dismiss, the debate continued. Defendants argued that document review is a core attorney function, while Lola’s counsel countered that Lola’s work did not amount to practicing law because it was mechanical and did not involve the use of any legal judgment or discretion.<sup>34</sup> The district court faced two preliminary considerations: (1) whether to fashion an “entirely new federal standard for the practice of law”; and (2) if not, which state’s substantive law to use.<sup>35</sup> Ultimately, the court declined to create a federal standard and distinguished its decision from other district court decisions that had previously created the possible groundwork for such a standard.

The court first criticized *Henig v. Quinn Emanuel Urquhart & Sullivan, LLP*,<sup>36</sup> another Southern District of New York decision involving a similar FLSA action brought by a contract document-review attorney.<sup>37</sup> Although the *Henig* court fashioned a three-pronged federal test to assess whether a contract document-review attorney was practicing law, the *Lola* court declined to follow that approach.<sup>38</sup> In fact, it did not follow any preexisting approaches from other courts in making this determination. Instead, the *Lola* court turned to North Carolina state law to guide its analysis, focusing on a statute that defined the practice of law—in a way the court considered unclear—as:

*[P]erforming any legal service for any other person, firm or corporation, with or without compensation, specifically including . . . the preparation and filing of petitions for use in any court, including administrative tribunals and other judicial or quasi-judicial bodies, or assisting by advice, counsel, or otherwise in any legal work; and to advise or give opinion upon the legal rights of any person, firm or corporation . . .*<sup>39</sup>

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<sup>32</sup> *See id.*

<sup>33</sup> *Id.* at 20.

<sup>34</sup> *Lola*, 2014 WL 4626228, at \*3.

<sup>35</sup> *See id.* (internal quotation marks omitted).

<sup>36</sup> 151 F. Supp. 3d 460 (S.D.N.Y. 2015).

<sup>37</sup> *See Lola*, 2014 WL 4626228, at \*6.

<sup>38</sup> *See id.*

<sup>39</sup> *Id.* at \*10 (citing N.C. Gen. Stat. § 84-2.1) (2015).

Finding that the North Carolina statutes did not provide much guidance in defining the practice of law, the court then turned to a North Carolina ethics opinion that defined legal support services as those including “reviewing documents.” The court considered it dispositive, given that Lola had failed to cite to any authority in support of his position that the practice of law only included tasks requiring “the exercise of legal judgment and discretion.”<sup>40</sup> The reliance on this ethics opinion is interesting, as the ultimate *Lola* decision raises ethical questions, discussed in Part III of this Article, regarding the unauthorized practice of law.

The court determined, in light of the ethics opinion, that it would accept a low threshold in defining the bounds of the practice of law:

Even undisputedly legal services like the drafting of motion briefs and the negotiating of documents require the performance of tasks—checking cases to make sure quotations are accurately reproduced, conforming citations to the stylistic dictates of the Bluebook, ensuring that documents are free of grammatical and typographical errors—that require little to no legal judgment.<sup>41</sup>

In justifying this low baseline, the court acquiesced to the defendants’ appeal to tradition, stating, that “[a]s junior associates at law firms well know, these tasks are the bread and butter of much legal practice and essential to the competent representation of clients.”<sup>42</sup> And with that, the court dismissed the case.<sup>43</sup>

### *C. The Impact of Lola’s Second Circuit Appeal*

At the hearing for Lola’s appeal of the district court’s decision to the Second Circuit, the judges pressed the defendants-appellees on whether a federal standard for what qualifies as the practice of law should exist, and why the court should use North Carolina law to interpret the case.<sup>44</sup> More importantly, however, the Second Circuit became the first federal appellate court to draw a distinction between the roles of person and machine in the “practice of law,” a distinction with significant implications for the provision of legal services.

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<sup>40</sup> *Id.* at \*12.

<sup>41</sup> *Id.* at \*13.

<sup>42</sup> *Id.*

<sup>43</sup> *Id.* at \*14.

<sup>44</sup> Gabe Friedman, *2nd Circuit Looks at Contract Attorneys*, BIG L. BUS. (May 29, 2015), <http://bol.bna.com/2nd-circuit-looks-at-contract-attorneys/> [<http://perma.cc/GK8B-BQ3L>].

Specifically, during questioning, Judge Raymond Lohier, Jr. asked Skadden’s attorney about computerization, a surprising curve ball that would become dispositive in resolving the case. More importantly, this line of questioning was the first time in any case where the judges clearly indicated that “legal” tasks completed by machines were not “legal” at all and could not be considered the “practice of law.” In particular, consider this exchange:

JUDGE LOHIER: If that’s the case, given what your adversary just said about what Mr. Lola actually was actually doing, which was to be given a set of search terms and to see if documents had the search terms—a *computer can do that*, and in effect confirms what the computer has determined. *How in the world is that the practice of law, under any jurisdiction?*

MR. GERSHENGOM: Well, we don’t agree, your honor.

JUDGE LOHIER: I know you don’t, but how in the world is *that* the practice of law?

MR. GERSHENGOM: Well what we think—

JUDGE LOHIER [interjecting]: Do you agree that it is not the practice of law? Maybe I’ll put it that way.

MR. GERSHENGOM: *If a computer is doing it, Your Honor, it would not be the practice of law.* That’s not the facts that we have before us. Mr. Lola is a licensed attorney. He was engaged as a licensed contract attorney for this project conducting document review. And what Lola has tried to do here is really denigrate the work that he was performing as a contract attorney. Lola was engaged in the review of documents. He reviewed the documents from the multi-district litigation here. At times he redacted portions of those documents and had to know what he was redacting.<sup>45</sup>

The issue of “legal work” performed by machines was neither raised at the district court level nor brought up by either party in briefings, and yet it became the deciding factor regarding whether Lola was practicing law.

Earlier in the plaintiffs-appellants’ argument, Judge Lohier had foreshadowed that the issue would be significant to the

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<sup>45</sup> Oral Argument at 40:20, *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, 620 F. App’x 37 (2d Cir. 2015) (No. 14-3845-cv) (emphases added) (recording on file with authors).

panel's decision, and had raised another important point: perfunctory functions that can be simply conducted by a machine do not require attorney oversight and are thus outside the "practice of law." Or, in other words, if a task conducted by a machine requires attorney oversight, the task is part of the "practice of law." As discussed in the *Lola* oral argument:

JUDGE LOHIER: Well your point is that there is no jurisdiction—and I think this is the way you started out—there is no jurisdiction that would regard what he did as the practice of law.

MR. KIRSCHENBUAM: Absolutely your honor.

JUDGE LOHIER: A machine could do this.

MR. KIRSCHENBUAM: A machine does do, a machine does do it. This is simply oversight of a machine.

JUDGE LOHIER: So a human being, why would you need a human being to conduct oversight of the machine if it is that perfunctory of a function?<sup>46</sup>

Although in its written opinion the Second Circuit implicitly rejected the calls to set a national standard and agreed that state law controlled, it disagreed with the district court that *Lola* was "practicing law" under North Carolina standards.<sup>47</sup> Like the district court, the Second Circuit found that the North Carolina statutes were not helpful because they did not clarify whether "legal services" included the performance of document review.<sup>48</sup>

The Second Circuit opinion departed from the lower court in its interpretation of the North Carolina ethics opinion.<sup>49</sup> The appellate court explained that the ethics opinion strongly suggested "the exercise of at least a modicum of independent legal judgment" was inherent to the definition of the "practice of law."<sup>50</sup> The Second Circuit further found that the district court was wrong in interpreting the ethics opinion as *per se* determinative of the issue,<sup>51</sup> underscoring that the same two cases relied upon by the district court reviewed tasks that depended on at least some exercise of legal judgment.<sup>52</sup> In contrast with the district court, the Second Circuit found that it

<sup>46</sup> *Id.* at 34:00.

<sup>47</sup> *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, 620 F. App'x 37, 44 (2d Cir. 2015).

<sup>48</sup> *Id.* at 43.

<sup>49</sup> *See id.* at 44.

<sup>50</sup> *Id.*

<sup>51</sup> *See id.*

<sup>52</sup> *See id.* at 45.

could not be assumed that Lola exercised legal judgment in his work: “The gravamen of Lola’s complaint is that he performed document review under such tight constraints that he exercised no legal judgment whatsoever—he alleges that he used criteria developed by others to simply sort documents into different categories.”<sup>53</sup>

Remarkably, the Second Circuit’s decision appears to have ultimately turned on Judge Lohier’s seemingly spontaneous question of whether a task can be called the “practice of law” if it can be conducted by a machine:

We find that Lola adequately alleged in his complaint that he failed to exercise any legal judgment in performing his duties for Defendants. *A fair reading of the complaint in the light most favorable to Lola is that he provided services that a machine could have provided.*<sup>54</sup>

The Second Circuit vacated and remanded the district court’s dismissal.<sup>55</sup> In doing so, the appellate court, for the first time anywhere in jurisprudence, essentially held that the practice of law must be something innately human, beyond what a machine can do:

The parties themselves agreed at oral argument that an individual who, in the course of reviewing discovery documents, *undertakes tasks that could otherwise be performed entirely by a machine cannot be said to engage in the practice of law.*<sup>56</sup>

Importantly, the court’s statements suggest that machines can remove tasks from the scope of the “practice of law,” such that machines can encroach on a lawyer’s role in society.

Although much ink has been spilled on the topic of machines replacing humans, it was not until *Lola* that a court closely considered the matter. To be clear, as much as Lola’s supporters would have liked,<sup>57</sup> the Second Circuit did not create a binding precedent stating that document review could not be considered “practicing law” under the FLSA, which would in turn allow

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<sup>53</sup> *Id.*

<sup>54</sup> *Id.* (emphasis added).

<sup>55</sup> *See id.*

<sup>56</sup> *Id.* (emphasis added).

<sup>57</sup> See Staci Zaretsky, *Federal Appeals Court Says Doc Review Is NOT Real Legal Work*, ABOVE THE LAW (July 23, 2015, 12:07 PM), <http://abovethelaw.com/2015/07/federal-appeals-court-says-doc-review-is-not-real-legal-work> [<http://perma.cc/A45F-APGN>].

Lola's fellow document-review attorneys to collect overtime.<sup>58</sup> As was pointed out in one of the near-term reviews of the decision, "the Second Circuit's decision provides surprisingly little help in determining when the very common task of document review is or is not 'practicing law' for any purpose."<sup>59</sup> While it is true that the *Lola* decision merely reversed the district court's finding that all document-review work constituted the practice of law *per se* under North Carolina state law, the Second Circuit's distinction between machine-led and human-led tasks would require a district court to consider whether Lola's task was purely mechanistic. Thus, the district court on remand could still have found that Lola's document review *did* constitute practicing law if, for example, the document review was related to the non-mechanistic task of fact-finding.

Despite the precedential limits and the small sums at issue in the case, the *Lola* court did something extraordinary: it constituted the first judicial step in distancing the work of lawyers from that of machines. In agreeing with Lola, the Circuit's conclusion was based less on the question of Lola's work and more on the nature of the computer's work. If, after all, a computer could perform the same function as a contract attorney, could that work truly be considered the "practice of law" when performed by a human being instead?<sup>60</sup>

*Lola's* human outcome is also a notable harbinger of the impact that an AI-infused legal field may have on lower-level legal jobs. Soon after the Second Circuit's remand, the case settled.<sup>61</sup> The settlement sum was \$75,000, to be split by Lola and two other plaintiffs who opted in.<sup>62</sup> Experts predicted that Lola received approximately \$7,500 with a small bonus for being the lead plaintiff, and that the other two class members likely received a similar amount.<sup>63</sup> Lola paid a very high personal price for such a small victory. An Associated Press reporter who followed up with him found that Lola could not get another

<sup>58</sup> Indeed, even the FLSA revisions enacted in 2016 by the Obama Administration, subject as they may be to controversy and even potentially disabling legal attack, do not remove or alter the "practicing law" exemption. See Defining and Delimiting the Exemptions for Executive, Administrative, Professional, Outside Sales and Computer Employees, 29 C.F.R. § 541.304 (2016).

<sup>59</sup> Bernie Burk, *Lola Wage-and-Hour Document Review Case Settles; Vexing Questions About What Constitutes "The Practice of Law" Persist*, FAC. LOUNGE (Dec. 19, 2015), <http://www.thefacultylounge.org/2015/12/lola-wage-and-hour-document-review-case-settles-vexing-questions-about-what-constitutes-the-practice.html> [<http://perma.cc/9MES-3ZXX>].

<sup>60</sup> Kathryn Rubino, *Second Circuit Sympathetic To Contract Attorneys?* ABOVE THE LAW (June 1, 2015, 1:50 PM) <http://abovethelaw.com/2015/06/second-circuit-sympathetic-to-contract-attorneys/> [<http://perma.cc/WA27-QWKB>].

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

<sup>63</sup> *Id.*

contract document-review job and believed that he had been blackballed by the industry.<sup>64</sup> He could not pay his bills, was forced to live in his car, and lost his marriage during the court battle.<sup>65</sup> According to the reporter, “Lola told me he’s thinking about giving up on the law and getting a job building houses.”<sup>66</sup>

*Lola* is a watershed decision that underscores the importance of how the “practice of law” will be defined in the next few decades. According to the *Lola* decision, if a lawyer is performing a particular task that can be done by a machine, then that work is not practicing law. A fair expansion of that concept would leave any legal task traditionally performed by lawyers at risk of losing legal status simply because a computer would be able to do it. On the one hand, allowing the capabilities of the machines to define the parameters of the “practice of law” opens the door to greater innovation within the legal field, as such capabilities would not be regulated by rules governing the profession. Under this approach, as machine capabilities improve, more and more tasks will become removed from what we call the practice of law. The more common “practice of law” interpretation, however, does not distinguish between lawyer and machine, and instead requires that tasks that have been traditionally “legal” in nature remain within the “practice.” Historically, this definition of the “practice of law” has stymied innovation, but has saved attorneys’ jobs. Although technology will continue to evolve and some encroachment into the field by machines is inevitable, the latter approach will prove most protective for legal workers.

In the past, the legal field has had time to carefully consider its adoption of technological innovations. This is no longer the case. *Lola* has changed the inquiry behind the meaning of the “practice of law,” limiting the extent to which the profession may define its practice by appeals to tradition. As discussed in the next Section, technology improves at an exponential pace and the capabilities of machines are now expanding at an astonishing rate, increasing the urgency with which legal actors will need to differentiate their human contributions from machine-led tasks. *Lola* suggests that the complexity of those technological advancements is now eroding carefully erected protections sheltering the legal profession from disruption. The time is rapidly approaching when many lawyers, professors, judges, managing partners, and other legal professionals will

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<sup>64</sup> *Id.*

<sup>65</sup> Alison Frankel, *The Sad Tale of the Contract Lawyer Who Sued Skadden (and Lost)*, REUTERS BLOGS (Sept. 17, 2014), <http://blogs.reuters.com/alison-frankel/2014/09/17/the-sad-tale-of-the-contract-lawyer-who-sued-skadden-and-lost> [<http://perma.cc/R368-LU9W>] (“Lola said he can’t get work anymore as a contract lawyer—no one wants to hire someone who sued his last employer.”).

<sup>66</sup> *Id.*

regret that they did not act before technology caught up, and surpassed, the legal profession.

**II. WHY THIS TIME IS DIFFERENT: THE TECHNOLOGICAL  
THREAT TO THE LEGAL PROFESSION IS NO LONGER  
THEORETICAL**

***A. Haven't We Heard Many Times Before that Technology  
Will Take Over the Legal Profession?***

Time and again, we have heard the warning that the robots are coming—and they are coming for our jobs. But are we meeting Chicken Little or the Boy Who Cried Wolf? Consider the following example:

There are many lawyers who believe that the fruits of the new Industrial Revolution will benefit the legal profession as well as others. There are other lawyers who seem to be frightened by the prospect. The computer is not a substitute for lawyers and judges. It is a tool that will lighten their burdens and aid them in achieving clear thinking more readily and with less fatigue.<sup>67</sup>

The date of this quote? 1963. And it should be noted that a citation editorially omitted from the quote references prior ABA committee discussions going back even further, to 1952.

Much more recently, Seton Hall Law School Professor Michael Simkovic and Rutgers Business School Professor Frank McIntyre dismissed concerns that new AI technology will eliminate lawyers' jobs any more than prior technology:

Studies of outsourcing and automation find that work that requires complex thought and cannot easily be broken down into simple rules or algorithms is more difficult to automate or outsource, and this favors highly educated workers such as law degree holders over those with less education. . . . Predictions of structural change in the legal industry date back at least to the invention of the typewriter. But lawyers have prospered while adapting to once threatening new technologies and modes of work.<sup>68</sup>

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<sup>67</sup> Reed C. Lawlor, *What Computers Can Do: Analysis and Prediction of Judicial Decisions*, 49 ABA J. 337, 337 (1963) (citations omitted).

<sup>68</sup> Michael Simkovic & Frank McIntyre, *The Economic Value of a Law Degree*, 43 J. LEGAL STUD. 249, 275 (2014).

Even within the relatively recent past, until the early 2000s, attempts to disrupt the legal industry through AI had little impact. Of all the legal futurists who have championed the need for positive change in the legal community in response to the rise of technology, there is no greater name than that of Professor Richard Susskind, who spent more than two decades writing about the future of law and lawyers starting with his groundbreaking 1996 book *The Future of Law*.<sup>69</sup> Yet even Susskind acknowledges the irony of these repeated warnings: “[F]or almost 15 years now, inquiries into the possibility of knowledge-based computer-assisted legal reasoning have been undertaken and yet have yielded far fewer positive results than comparable efforts in other disciplines.”<sup>70</sup>

Questions about AI are essentially questions about the division of labor between person and machine, as illustrated by the *Lola* court’s inquiry. Yet, after decades of constant warnings culminating in minimally disruptive legal technologies, why should the legal profession suddenly now consider AI to be a genuine and real threat? To answer that question, it is important to understand the calm before the disruptive storm, when computer systems first began, and how advances in computer science, coupled with the exponential growth of technology, have led to the legal profession’s present reality.

### ***B. Technology’s Relationship with the Legal Field***

Under the logic of *Lola*, tasks that may be completed by machines do not constitute the “practice of law.” The crux of this analysis requires one to consider where a line may be drawn between machine and human. This exercise is not much different than the one conducted by Alan Turing almost seven decades ago, when he posed the question of whether machines could think and developed the now-famous “Turing Test.”<sup>71</sup>

The Turing Test is the ultimate line-drawing exercise between machine and human. It was an adaptation of the “imitation game,” where a man and woman are secluded from an interrogator who is tasked with guessing the identities of the players by asking questions and examining written replies.<sup>72</sup>

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<sup>69</sup> RICHARD SUSSKIND, *THE FUTURE OF LAW: FACING THE CHALLENGES OF INFORMATION TECHNOLOGY* (1996).

<sup>70</sup> RICHARD SUSSKIND, *TRANSFORMING THE LAW* 192 (2000).

<sup>71</sup> Ian Watson, *How Alan Turing Invented the Computer Age*, SCI. AM. BLOG (Apr. 26, 2012), <http://blogs.scientificamerican.com/guest-blog/how-alan-turing-invented-the-computer-age/> [<http://perma.cc/DS2Q-DJPQ>]; see A.M. Turing, *Computing Machinery and Intelligence*, 59 MIND: A Q. REV. PSYCHOL. & PHIL. 433, 433 (1950); Noel Sharkey, *Alan Turing: The Experiment that Shaped Artificial Intelligence*, BBC NEWS (June 21, 2012), <http://www.bbc.com/news/technology-18475646> [<http://perma.cc/6FJW-FCFS>].

<sup>72</sup> Sharkey, *supra* note 71.

Replacing one player with a computer, the test measures the ability of a machine to “think” based on the interrogator’s ability to differentiate between responses given by the computer or person.<sup>73</sup> Arguably, the Turing Test has still never been passed, but it is inevitably a matter of time before that changes.<sup>74</sup>

Though it was developed more than half a century before the Second Circuit’s questioning at the *Lola* oral argument, the Turing Test’s line of questioning seems strikingly familiar. Indeed, both Alan Turing and the Second Circuit realized that machines would not only replicate rote tasks, but would also be increasingly able to engage in more complicated data processing. While it may be surprising that this awareness has existed for so long, the legal field’s glacial adoption of technology and AI can be attributed to the technological environment in which today’s leading thinkers were trained. Notably, during that time (between the 1960s and the mid-1990s), the experiments of computer scientists were never able to engage in the complicated reasoning processes required in legal thinking.<sup>75</sup>

For example, in the 1960s, scientists attempted to create deductive, or rules-based, models for computer algorithms to mimic how people think. These programs were too “brittle,” and used an approach that was “fundamentally broken.”<sup>76</sup> Essentially, the rules—along with the underlying thought processes—were too many and too complex for the technology of the day.<sup>77</sup> Attempts to adapt these early rules-based systems to law similarly failed.<sup>78</sup> Ultimately, the limitations of these models led to an “AI Winter” that lasted through much of the 1980s and 1990s, during which “AI” became a term of derision and once-grand ambitions were shelved.<sup>79</sup>

The critical change came about in the 1990s, when scientists realized that algorithms did not need to process information in

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<sup>73</sup> *Id.*

<sup>74</sup> See Aleksandar Todorović, *Has the Turing Test Been Passed? No.*, HAS TURING TEST BEEN PASSED, <http://isturingtestpassed.github.io/> [<http://perma.cc/X87Q-WSNR>]. But see Vladmir Veselov, *Computer AI Passes Turing Test in ‘World First’*, BBC NEWS (June 9, 2014), <http://www.bbc.com/news/technology-27762088> [<http://perma.cc/P6P7-YL97>].

<sup>75</sup> STEPHEN BAKER, FINAL JEOPARDY: MAN VS. MACHINE AND THE QUEST TO KNOW EVERYTHING 35-36 (2011); see also Kevin Kelly, *The Three Breakthroughs that Have Finally Unleashed AI on the World*, WIRED (Oct. 27, 2014), <http://www.wired.com/2014/10/future-of-artificial-intelligence/> [<http://perma.cc/S83N-X5YJ>] (describing important advances in AI).

<sup>76</sup> James Somers, *The Man Who Would Teach Machines to Think*, ATLANTIC (Nov. 2013), <http://www.theatlantic.com/magazine/archive/2013/11/the-man-who-would-teach-machines-to-think/309529> [<http://perma.cc/W4TX-PUV4>].

<sup>77</sup> See *id.*

<sup>78</sup> Donald Waterman & Mark Peterson, *An Expert System Approach to Evaluating Product Liability Cases*, in *COMPUTER POWER AND LEGAL REASONING* 629, 632 (Charles Walter ed., 1985).

<sup>79</sup> BAKER, *supra* note 75; see Kelly, *supra* note 75.

a rules-based manner, like people,<sup>80</sup> and could out-perform humans by processing information differently.<sup>81</sup> Inductive, or data-driven, systems were developed, which differed from the “brittle” deductive systems in that they “incrementally buil[t] complex models by automatically detecting patterns as data arrives” and, in a sense, “program[med] themselves over time with the rules to accomplish a task.”<sup>82</sup>

Now compounded by a series of exponential advances in computer technology, algorithms may threaten the practice of law. Parallel computation has become cheaper due to the advent and subsequent popularity of video games.<sup>83</sup> As such, programs may engage in various tasks simultaneously, allowing for more complicated computations.<sup>84</sup> The increased use of the Internet and social media platforms have also opened the door to greater access to larger sizes of data that can be used to train programs—“[m]assive databases, self-tracking web cookies, online footprints, terabytes of storage, decades of search results, Wikipedia, and the entire digital universe [have become] the teachers” for AI.<sup>85</sup> And computer scientists have found ways to make more complicated algorithms that can quickly parse through data.<sup>86</sup>

### C. Technologies Threatening the Legal Field

As one of the most recent examples of this technology at work, IBM’s Watson is a cognitive computing system that can “tackle[] increasingly complex data sets and develop[] understanding, reasoning, and learning that go far beyond deciphering.”<sup>87</sup> In order to gain this “knowledge,” IBM’s Watson “ingests a corpus of knowledge, curated by experts on any given subject” and is “trained by being fed a series of question-answer pairs.”<sup>88</sup> The machine’s knowledge is “enhanced as humans . . . provide[] feedback on the accuracy of the system’s responses.”<sup>89</sup>

<sup>80</sup> Benjamin H. Barton, *The Lawyer’s Monopoly—What Goes and What Stays*, 82 *FORDHAM L. REV.* 3068, 3071 (2014).

<sup>81</sup> THOMAS H. DAVENPORT & JULIA KIRBY, *ONLY HUMANS NEED APPLY: WINNERS AND LOSERS IN THE AGE OF SMART MACHINES* 4 (2016).

<sup>82</sup> Harry Surden, *Machine Learning and Law*, 89 *WASH. L. REV.* 87, 94 (2014).

<sup>83</sup> See Kelly, *supra* note 75.

<sup>84</sup> See *id.*

<sup>85</sup> *Id.*

<sup>86</sup> See *id.*

<sup>87</sup> John E. Kelly III, *Computing, Cognition, and the Future of Knowing: How Humans and Machines are Forging a New Age of Understanding*, *INT’L BUS. MACHINES* 4 (Oct. 2015), [http://www.research.ibm.com/software/IBMResearch/multimedia/Computing\\_Cognition\\_WhitePaper.pdf](http://www.research.ibm.com/software/IBMResearch/multimedia/Computing_Cognition_WhitePaper.pdf) [<http://perma.cc/HFX4-ER9F>].

<sup>88</sup> *Id.* at 6.

<sup>89</sup> *Id.*

IBM's Watson's cognitive computing system relies on "[l]arge-scale machine learning" in order to "improve with training and use."<sup>90</sup> Machine learning is a "core subarea of artificial intelligence" in which algorithms learn to "program[] by example."<sup>91</sup> That is, instead of being programmed "to solve the task directly" the computer is programmed to "come up with its own program based on examples."<sup>92</sup> Thus, machine learning algorithms are "self-learning" and can "mimic the way the human brain works."<sup>93</sup>

Machine learning relies on "data mining, pattern recognition[,] and natural language processing" to learn from large data sets,<sup>94</sup> and has also led to advancements in those fields, causing a symbiotic relationship that can only make computers smarter. Data mining is a process that "extract[s] interesting—nontrivial, implicit, previously unknown and potentially useful—information from data in large datasets" and focuses on the properties of datasets.<sup>95</sup> "Pattern recognition" is "concerned with the automatic discovery of regularities in data through the use of computer algorithms and with the use of [those] regularities to take actions such as classifying the data into different categories."<sup>96</sup> "Natural language processing" is a field that allows "for computers to analyze, understand, and derive meaning from human language in a smart and useful way,"<sup>97</sup> thereby teaching a computer to understand and manipulate human language.<sup>98</sup> Relatedly, "sentiment analysis" and "opinion mining" of text, which is defined as "the computational treatment of opinion, sentiment, and subjectivity

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<sup>90</sup> *Id.*

<sup>91</sup> Rob Schapire, *COS 511: Theoretical Machine Learning*, PRINCETON U. 1 (Feb. 4, 2008), [http://www.cs.princeton.edu/courses/archive/spr08/cos511/scribe\\_notes/0204.pdf](http://www.cs.princeton.edu/courses/archive/spr08/cos511/scribe_notes/0204.pdf) [<http://perma.cc/7ZFT-Y3UQ>].

<sup>92</sup> *Id.*

<sup>93</sup> Bernard Marr, *What Everyone Should Know About Cognitive Computing*, FORBES (Mar. 23, 2016, 3:28 AM), <http://www.forbes.com/sites/bernardmarr/2016/03/23/what-everyone-should-know-about-cognitive-computing/> [<http://perma.cc/4Y75-UECX>]; see also SHAI SHALEV-SHWARTZ & SHAI BEN-DAVID, UNDERSTANDING MACHINE LEARNING: FROM THEORY TO ALGORITHMS 21-25 (2014) (discussing the use cases and types of self-learning algorithms).

<sup>94</sup> Marr, *supra* note 92.

<sup>95</sup> JOHANNES FÜRNRANZ, DRAGAN GAMBERGER & NADA LAVRAČ, FOUNDATIONS OF RULE LEARNING 4 (2012).

<sup>96</sup> CHRISTOPHER M. BISHOP, PATTERN RECOGNITION AND MACHINE LEARNING 1 (2006).

<sup>97</sup> Matt Kiser, *Introduction to Natural Language Processing (NLP)*, ALGORITHMIA (Aug. 11, 2016), <http://blog.algorithmia.com/introduction-natural-language-processing-nlp> [<http://perma.cc/KD2B-AM6P>].

<sup>98</sup> DANIEL JURAFSKY & JAMES H. MARTIN, SPEECH AND LANGUAGE PROCESSING: AN INTRODUCTION TO NATURAL LANGUAGE PROCESSING, COMPUTATIONAL LINGUISTICS, AND SPEECH RECOGNITION 12-13 (2d ed. 2008).

in text,”<sup>99</sup> allows a computer to determine whether statements are positive, negative, or neutral.

Machine learning can take place in a number of ways. These include “supervised learning,” where the learning algorithm is given inputs and desired outputs with the goal of learning which rules lead to the desired outputs; “unsupervised learning,” where the learning algorithm is left on its own to determine the relationships within a dataset; and “reinforcement learning,” where the algorithm is provided feedback on its performance as it navigates a data set.<sup>100</sup> Machine learning has been applied to better translate documents,<sup>101</sup> to provide users with personalized content,<sup>102</sup> and to make healthcare treatment predictions.<sup>103</sup>

IBM’s Watson, in particular, also “rel[ies] on deep learning algorithms and neural networks to process information by comparing it to a teaching set of data.”<sup>104</sup> Deep learning software stems from machine learning, but “attempts to mimic the activity in layers of neurons in the neocortex” and “learns, in a very real sense, to recognize patterns in digital representations of sounds, images, and other data.”<sup>105</sup> The software results in “higher accuracy and faster processing” than machine learning because it relies on “neural networks,” which are the “first family of algorithms within machine learning that do not require manual feature engineering” and can instead “learn on their own by processing and learning the high-level features from raw data.”<sup>106</sup>

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<sup>99</sup> Bo Pang & Lillian Lee, *Opinion Mining and Sentiment Analysis*, 2 FOUND. & TRENDS INFO. RETRIEVAL 1, 6 (2008).

<sup>100</sup> STUART J. RUSSELL & PETER NORVIG, *ARTIFICIAL INTELLIGENCE: A MODERN APPROACH* 650 (2d ed. 2009).

<sup>101</sup> James Le, *7 Machine Learning Applications at Google*, MEDIUM (Aug. 24, 2016), [http://medium.com/@james\\_aka\\_yale/7-machine-learning-applications-at-google-843d49d77bc8](http://medium.com/@james_aka_yale/7-machine-learning-applications-at-google-843d49d77bc8) [<http://perma.cc/D74G-FQLC>].

<sup>102</sup> Andrew Johnson, *Rise of the Machines: How Machine Learning Can Transform Your Content Delivery + Increase Content Effectiveness*, CONTENT SCI. REV. (Mar. 1, 2018), <http://review.content-science.com/2018/03/rise-of-the-machines-how-machine-learning-can-transform-your-content-delivery-increase-content-effectiveness/> [<http://perma.cc/FWQ6-RRB7>].

<sup>103</sup> Bernard Marr, *How Machine Learning, Big Data and AI Are Changing Healthcare Forever*, FORBES (Sept. 23, 2016, 1:48 AM), <http://www.forbes.com/sites/bernardmarr/2016/09/23/how-machine-learning-big-data-and-ai-are-changing-healthcare-forever/> [<http://perma.cc/2XQ2-NTB9>].

<sup>104</sup> Marr, *supra* note 93.

<sup>105</sup> Robert D. Hof, *Deep Learning*, MIT TECH. REV. (2013), <http://www.technologyreview.com/s/513696/deep-learning> [<http://perma.cc/V9NY-CPQE>].

<sup>106</sup> Guy Caspi, *What’s the Difference Between Deep Learning and Machine Learning?*, BETANEWS (Dec. 12, 2016), <https://betanews.com/2016/12/12/deep-learning-vs-machine-learning/> [<http://perma.cc/GAS2-5DJB>].

The state of AI is such that it can analyze large amounts of disorganized images, words, documents, and numbers in an astoundingly fast amount of time. Further, even with very little input, AI can quickly identify trends and outliers within the data and “learn” from patterns it finds, allowing it to make useful predictions.

***D. Exponential Laws Suggest that  
the AI “Spring” is Here to Stay***

A number of emergent “laws” are useful for understanding the exponential growth of technology in the last twenty years. Moore’s Law, by far the best known, describes the increase in power (versus cost) of computer processors over time. This law was first advanced by Gordon Moore, co-founder of what is now the Intel Corporation, when he predicted in a 1965 essay that, “complexity for minimum component costs” (*i.e.*, the number of circuits that could be integrated into a computer processor at the lowest possible cost) had doubled for several years and would continue to do so for at least ten more.<sup>107</sup> This predicted growth rate was later increased, by another Intel executive, to doubling every eighteen months.<sup>108</sup> Some scientists have recently noted that Moore’s Law could be slowing down, but that quantum computing would be the next step, and could even shatter the barriers existing under Moore’s Law.<sup>109</sup> Scientists at the Lawrence Livermore National Laboratory exploring quantum computing have found that, “[w]hile classical computers perform functions in serial (generating one answer at a time), quantum computers could potentially perform functions and store data in a highly parallelized way, exponentially increasing speed, performance and storage capacity.”<sup>110</sup>

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<sup>107</sup> Gordon E. Moore, *Cramming More Components onto Integrated Circuits*, 38 ELECTRONICS 114 (1965).

<sup>108</sup> Michael Kanellos, *Moore’s Law to Roll on for Another Decade*, CNET (Feb. 11, 2003, 4:35 AM), <http://www.cnet.com/news/moores-law-to-roll-on-for-another-decade/> [<http://perma.cc/S3QH-6QBQ>] (noting that the eighteen-month interval is typically mistakenly attributed to Moore).

<sup>109</sup> Jeremy Thomas, *Breaking the Law: Lawrence Livermore, Department of Energy Look to Shatter Moore’s Law Through Quantum Computing*, LAWRENCE LIVERMORE NAT’L LABORATORY (Mar. 19, 2018), <http://www.llnl.gov/news/breaking-law-lawrence-livermore-department-energy-look-shatter-moore%E2%80%99s-law-through-quantum> [<http://perma.cc/K3JL-84KH>].

<sup>110</sup> *Id.*; see also David Canton, *Should Artificial Intelligence be Regulated?*, SLAW (Mar. 14, 2018), <http://www.slw.ca/2018/03/14/should-artificial-intelligence-be-regulated/> [<http://perma.cc/VL7S-R6BB>] (quoting Elon Musk as saying “I am really quite close, I am very close, to the cutting edge in AI and it scares the hell out of me . . . . It’s capable of vastly more than almost anyone knows and the rate of improvement is exponential.”).

Another, albeit more obscure, gauge of the exponential growth in technology is Kryder's Law, which explains the advancement of hard-drive storage capacity versus cost.<sup>111</sup> It was described in a 2009 article by Mark Kryder, the former head of Carnegie Mellon University's Data Storage Systems Center, as indicating that "[t]he doubling of processor speed every 18 months is a snail's pace compared with rising hard-disk capacity."<sup>112</sup> As a result, "[i]nside of a decade and a half, hard disks had increased their capacity 1,000-fold, a rate that Intel founder Gordon Moore himself has called 'flabbergasting.'"<sup>113</sup>

Although there are other laws concerning the growth of computing power, for the purposes of this discussion, Nielsen's Law of bandwidth availability is the last such law addressed here. First explained by telecommunications industry expert Jakob Nielsen, it posits that connection speeds grow by fifty percent per year.<sup>114</sup>

Together, these emergent, exponential laws have brought us to the point in technology where AI is available and affordable. Moore's Law has provided us with super-fast, super-cheap processors that can run the powerful neural networks needed for machine learning systems.<sup>115</sup> Kryder's Law has made storage so cheap that the terabyte- and petabyte-sized "Big Data" storage platforms needed to train machine-learning systems are readily available.<sup>116</sup> Finally, Nielsen's Law and Moore's Law predicted the emergence of the high-speed bandwidth necessary to access these new networks and data sets from anywhere, known in common parlance as "cloud computing."<sup>117</sup> Cheap and accessible super-powered AI has also led to greater connectivity and an explosive increase in available data.

When this kind of power is combined with AI, scientists and entrepreneurs can chip away at the legal field by outsourcing to machines tasks that are currently understood as within the "practice of law." Only the legal field can save itself.

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<sup>111</sup> Chip Walter, *Kryder's Law*, SCI. AM. (Aug. 1, 2005), <http://www.scientificamerican.com/article/kryders-law/> [<http://perma.cc/M55E-KBM7>].

<sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> See Jakob Nielsen, *Nielsen's Law of Internet Bandwidth*, NIELSEN NORMAN GROUP (Apr. 5, 1998), <https://www.nngroup.com/articles/law-of-bandwidth/> [<http://perma.cc/6HJP-FX73>].

<sup>115</sup> See Kelly, *supra* note 75.

<sup>116</sup> *Id.*

<sup>117</sup> Michael Rossiter, *The Origins of Cloud Computing & SaaS*, MEDIUM (Mar. 17, 2016), <http://medium.com/@MikeRossiter/the-origins-of-cloud-computing-saas-c9dc5f29d42c> [<http://perma.cc/PZ48-UY8E>].

### III. CHALLENGES TO CHANGE IN THE LEGAL PROFESSION

Both the current state of technology and the ever-increasing pace of technological innovation make one thing abundantly clear: automation of the law is nigh. Though humans often underestimate technology's exponential rate of change, the legal field has been fairly unique in its unwavering inability to adapt.<sup>118</sup> Indeed, the source of current inertia—and future seismic shifts in the field—are the very characteristics that have typified the legal field: namely, the hierarchical nature of the legal profession, its organizational structures, and the very personalities of attorneys.

#### *A. The Legal Profession Clings to the Status Quo Instead of Embracing Change*

Traditionally, the law has been a self-preserving monopoly that has enjoyed substantial immunity from outside challengers, particularly in comparison to other professions.<sup>119</sup> In fact, the law is the only “self-regulated” profession, which “has been exceptionally helpful to the legal profession and has often resulted in regulation by the lawyers, for the lawyers.”<sup>120</sup> Moreover, a process has not been established through which outsiders may challenge the constructs of the legal field.

Particularly relevant to this discussion is the legal field's enactment of professional rules, guidelines that govern civility and ethics within the practice and that protect legal professionals from overthrow. One such protectionist rule is ABA Professional Rule 5.4, which bars non-lawyer ownership interests in law firms (also known as “alternative business structures” or “ABS's”).<sup>121</sup>

Rule 5.4 is founded with three concerns in mind. First, it is designed to prevent undue influence by “non-lawyers” over

<sup>118</sup> Jason Tashea, *#MakeLawBetter: Keynote Address Lays Out the Future of Legal Services*, ABA J. (Mar. 9, 2018, 4:38 PM), [http://www.abajournal.com/news/article/makelawbetter\\_keynote\\_address\\_lays\\_out\\_the\\_future\\_of\\_legal\\_services](http://www.abajournal.com/news/article/makelawbetter_keynote_address_lays_out_the_future_of_legal_services) [<http://perma.cc/84XY-BDXG>] (quoting Dan Katz's keynote address at the 2018 ABA Techshow as stating that “legal innovation is actually a 5,000-year-old field” but “somewhere along the way we stalled out”); Kenneth Grady, *Stagnation and the Legal Industry*, ALGORITHMIC SOC'Y BLOG (Mar. 12, 2018), <http://medium.com/the-algorithmic-society/stagnation-and-the-legal-industry-bc801a8b4d38> [<http://perma.cc/F4CN-MXM4>] (“[I]f we look carefully at the legal industry, we can see that not much has changed from 100 years ago . . . . What passes for innovation is, for the most part, unremarkable.”).

<sup>119</sup> Laurel A. Rigertas, *The Legal Profession's Monopoly: Failing to Protect Consumers*, 82 FORDHAM L. REV. 2683, 2697 (2014).

<sup>120</sup> BENJAMIN H. BARTON, THE LAWYER-JUDGE BIAS IN THE AMERICAN LEGAL SYSTEM 16 (2011).

<sup>121</sup> MODEL RULES OF PROF'L CONDUCT r. 5.4 (AM. BAR ASS'N 2016).

lawyers through ownership interests in law firms, which would “give non-lawyers influence over an attorney’s handling of a case.”<sup>122</sup> Second, it acts as a safeguard for clients, under the rationale that a lawyer’s duty to protect clients’ interests is so unique that “non-lawyers cannot be trusted to act in the client’s best interests.”<sup>123</sup> Third, it seeks to protect professional discipline and independence of judgment, on the basis that non-lawyers would commercialize the practice of law and create competition that may ultimately hurt clients.<sup>124</sup>

Economic experts have calculated the estimated earnings premium created by regulations shielding lawyers from competition. Notably, the most recent numbers—dating from 2004—estimate that the earnings premium is at \$64 billion, an amount representing \$71,000 per each then-practicing lawyer.<sup>125</sup> Considering the economics at stake, it is unsurprising that debates over eliminating or limiting the Rule have been contentious and “bruising.”<sup>126</sup> ABS’s have been allowed, with some success, in Australia since 2001 and the United Kingdom since 2011.<sup>127</sup> Within the United States, however, only the District of Columbia allows for ABS’s and, even then, it only permits a minority interest with restrictions against providing non-legal services. As a result, this exception has been rarely used.<sup>128</sup> The New York State Bar considered allowing ABS’s in 2012, but ultimately strongly rejected the idea.<sup>129</sup> As for the rest

<sup>122</sup> Tom Gordon, *Responsive Law on Fee Sharing, Innovation, and the Consumer Interest*, UPCOUNSEL BLOG (2014), <http://www.upcounsel.com/blog/responsive-law-on-fee-sharing-innovation-and-the-consumer-interest> [http://perma.cc/N2WQ-PWT8].

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> The figure includes every lawyer, not just those practicing in big law firms. Clifford Winston & Quentin Karpilow, *Should the U.S. Eliminate Entry Barriers to the Practice of Law?*, 106 AM. ECON. REV. 171, 171-72 (2016).

<sup>126</sup> Alison Frankel, *Should Law Firms Have Non-Lawyer Owners? ABA reopens debate*, REUTERS (May 5, 2016), <http://blogs.reuters.com/alison-frankel/2016/05/05/should-law-firms-have-non-lawyer-owners-aba-reopens-debate/> [http://perma.cc/LE72-LFCY].

<sup>127</sup> Victor Li, *Non-Lawyer Ownership Laws In UK Allow Some Firms to Thrive*, ABA J. (Aug. 10, 2016), [http://www.abajournal.com/news/article/nonlawyer\\_ownership\\_laws\\_in\\_uk\\_alow\\_some\\_firms\\_to\\_thrive](http://www.abajournal.com/news/article/nonlawyer_ownership_laws_in_uk_alow_some_firms_to_thrive) [http://perma.cc/KXS9-3Z5G]; Dustin Ruge, *ABA: NO Change to Model Rule 5.4 (Private Equity Ownership) for Now . . .*, LINKEDIN (May 20, 2016), <http://www.linkedin.com/pulse/aba-change-model-rule-54-private-equity-ownership-now-dustin-ruge> [http://perma.cc/VW8X-FPVR].

<sup>128</sup> Sean T. Carnathan, *Is Prohibition of Non-Lawyer Ownership of Firms Antiquated?*, ABA LITIG. NEWS (July 2012), <http://apps.americanbar.org/litigationnews/articles-print/071012-non-lawyer-ownership-summer12.html> [http://perma.cc/7LC3-LPWJ].

<sup>129</sup> N.Y. STATE BAR ASS’N, REPORT OF THE TASK FORCE ON NONLAWYER OWNERSHIP 75 (Nov. 17, 2012), <http://www.nysba.org/WorkArea/DownloadAsset.aspx?id=26682>

of the United States, the ABS issue is so controversial that Professor Andrew Pearlman, Reporter for the ABA Ethics 20/20 Commission, stated that “[t]he ABA is reluctant to even discuss the issue at a policy level.”<sup>130</sup> Comments by lawyers to the more recent ABA Commission on the Future of Legal Services regarding ABS’s were almost uniformly overwhelmingly negative.<sup>131</sup>

The larger criticism of Rule 5.4 may be that it prevents investments in law firms that could overcome the problem caused by the short-term outlook of the partnership model and aging partners.<sup>132</sup> Even the ABA Report on the Future of Legal Services in the United States acknowledges the problem, though its recommendations do not go beyond mere pronouncements that courts, states, and the ABA “should explore” ABS’s and that it would “be useful” to do so.<sup>133</sup> The result has been to create a state of asymmetric warfare between law firms and ABS providers—especially technology-focused ones—that can raise money like traditional start-ups. As Professor Katz explains, “[w]hen other entities can raise capital and you can’t, you are at

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[<http://perma.cc/S9N7-S67K>] (“[T]he Task Force concluded that there was a need to draw a sharp line against nonlawyer ownership at this time.”); *see also id.* at 78 (“On the issue of nonlawyer ownership, by a vote of 16-1, the Task Force opposed New York enacting any form of nonlawyer ownership at this time.”).

<sup>130</sup> James Podgers, *Second Time Around*, 99 ABA J. 20, 21 (2013); *see* Candace M. Groth, *Protecting the Profession Through the Pen: A Proposal for Liberalizing ABA Model Rule of Professional Conduct 5.4 to Allow Multidisciplinary Firms*, 37 HAMLINE L. REV. 565, 571-73 (2014) (discussing the details on the defeat of proposals to liberalize Rule 5.4 within the ABA Ethics 20/20 Commission).

<sup>131</sup> *See* Alison Frankel, *Lawyers Remain Deeply Skeptical of Non-Lawyers Investing in Law Firms*, REUTERS (May 9, 2016), <http://blogs.reuters.com/alison-frankel/2016/05/09/lawyers-remain-deeply-skeptical-of-non-lawyers-investing-in-law-firms/> [<http://perma.cc/B6K4-KZ76>] (“On behalf of the Section of Family Law, we pose the following question: WHAT PART OF ‘NO!’ DO YOU NOT UNDERSTAND?” wrote one ABA group”); *see also* *Comments—Alternative Business Structures Issues Paper, COMM’N ON FUTURE LEGAL SERVS.*, [http://www.americanbar.org/groups/centers\\_commissions/commission-on-the-future-of-legal-services/Comments4.html](http://www.americanbar.org/groups/centers_commissions/commission-on-the-future-of-legal-services/Comments4.html) [<http://perma.cc/Z7AU-8XQR>] (listing compilation of negative responses from fifteen state and local bar associations and law firms).

<sup>132</sup> *See* Daniel Katz, *Innovation in the Legal Services Industry—The Future is Already Here, It is Just \*Not\* Evenly Distributed*, VIMEO, at 5:15 (2013), <http://vimeo.com/63008157> [<http://perma.cc/Q24E-ZGTT>]

<sup>133</sup> *COMM’N ON THE FUTURE OF LEGAL SERVS., AM. BAR ASS’N, REPORT ON THE FUTURE OF LEGAL SERVICES IN THE UNITED STATES* 6 (2016), [http://www.americanbar.org/content/dam/aba/images/abanews/2016FLSReport\\_FNL\\_WEB.pdf](http://www.americanbar.org/content/dam/aba/images/abanews/2016FLSReport_FNL_WEB.pdf) [<http://perma.cc/2ZHP-GVCM>]. As if to add obviousness to inanity, the Report also makes the recommendation that we “develop[] and assess[]” data on results if any jurisdiction ever does decide to allow for implementation of ABS. *Id.*

a significant disadvantage.”<sup>134</sup> During the time period that law firms have been frozen out of the capital markets, LegalZoom, a company that provides online legal forms for consumers and small businesses, started with \$2 million in investments and ultimately raised over \$100 million.<sup>135</sup> As Katz further notes, Rule 5.4 is “going to potentially hurt the very people it was designed to protect.”<sup>136</sup>

Rule 5.4 is not the only arrow in the quiver of those who would defend the monopoly of the law against intruders; there is also the web of state unauthorized practice of law (UPL) statutes, backed by the ABA at the national level. Although the definition of UPL is determined by each jurisdiction and UPL rules vary among each state,<sup>137</sup> the “practice of law” is generally defined as providing advice and counsel regarding legal matters, providing legal representation, and drafting legal documents.<sup>138</sup> These laws generally make it illegal for anyone who is not admitted to a state’s bar to provide any type of legal assistance.<sup>139</sup>

Some envision—or perhaps hope—that authorities will launch an all-out UPL fight against potential alternative providers. Others, such as Professor Barton, believe that the battle has yet to begin.<sup>140</sup> Yet when the authorities have attempted to make use of UPL statutes against alternative providers, they have lost. LegalZoom debuted in 2001, and has been willingly waving red flags at the regulators ever since that time. Despite the supposed power of the bar regulators, Professor Barton and journalist Daniel Fisher have both documented in great detail how LegalZoom has so far emerged

<sup>134</sup> Katz, *supra* note 132, at 5:29.

<sup>135</sup> See Laura Snyder, *Flexing ABS*, 101 ABA J. 62, 64 (2015).

<sup>136</sup> Katz, *supra* note 132, at 5:39.

<sup>137</sup> See Attorneys’ Liab. Assurance Soc’y, Inc., *Statutes and Rules Limiting Multijurisdictional Law Practice from 51 United States Jurisdictions*, AM. BAR ASS’N (2000), [http://www.americanbar.org/groups/professional\\_responsibility/committees\\_commissions/commission\\_on\\_multijurisdictional\\_practice/mjp\\_uplrules.html](http://www.americanbar.org/groups/professional_responsibility/committees_commissions/commission_on_multijurisdictional_practice/mjp_uplrules.html) [http://perma.cc/S5YM-D5U7].

<sup>138</sup> See TASK FORCE ON THE MODEL DEFINITION OF THE PRACTICE OF LAW, AM. BAR ASS’N, REPORT APP. A: STATE DEFINITIONS OF THE PRACTICE OF LAW (2003), [http://www.americanbar.org/content/dam/aba/administrative/professional\\_responsibility/model\\_def\\_migrated/model\\_def\\_statutes.authcheckdam.pdf](http://www.americanbar.org/content/dam/aba/administrative/professional_responsibility/model_def_migrated/model_def_statutes.authcheckdam.pdf) [http://perma.cc/8SPP-JUDM].

<sup>139</sup> MODEL RULES OF PROF’L CONDUCT r. 5.5 cmt. 2 (AM. BAR ASS’N 2016), [http://www.americanbar.org/groups/professional\\_responsibility/publications/model\\_rules\\_of\\_professional\\_conduct/rule\\_5\\_5\\_unauthorized\\_practice\\_of\\_law\\_multijurisdictional\\_practice\\_of\\_law/comment\\_on\\_rule\\_5\\_5\\_unauthorized\\_practice\\_of\\_law\\_multijurisdictional\\_practice\\_of\\_law.html](http://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_5_5_unauthorized_practice_of_law_multijurisdictional_practice_of_law/comment_on_rule_5_5_unauthorized_practice_of_law_multijurisdictional_practice_of_law.html) [http://perma.cc/S325-2LAU]. (“The definition of the practice of law is established by law and varies from one jurisdiction to another.”).

<sup>140</sup> Barton, *supra* note 80, at 3081 (“[L]awyer regulators have yet to launch an all out [sic] assault on computerization.”).

victorious in every regulatory battle.<sup>141</sup> Even if the welcomed (or perhaps feared) crusade against robots is ever launched, many believe it will be doomed to failure, as UPL laws “will continue to prove ineffective in stemming the emergence of widespread machine lawyering and preserving lawyers’ monopoly.”<sup>142</sup>

Finally, even if the threat of UPL enforcement were arguably viable against the spread of automated systems, the Second Circuit’s decision in *Lola* may have effectively ended that possibility. By deciding that “tasks that could otherwise be performed entirely by a machine cannot be said to engage in the practice of law,”<sup>143</sup> the Second Circuit has also made the logical corollary of that holding equally true: once some task can be entirely performed by a machine, that task can no longer be considered to be “the practice of law.” Thus, the Second Circuit has effectively granted the makers of such machines the ability to remove tasks from what could be considered legal practice.<sup>144</sup> This new power granted to the builders of legal software has not gone unnoticed, and the full implications of the *Lola* decision were in fact first mentioned by Noah Waisberg, CEO of contract automation provider Kira Systems, who asked, “With this definition of ‘practice of law,’ can a machine ever commit UPL?”<sup>145</sup>

Some commentators agree that the *Lola* decision will open the gates for the argument that “tasks that could otherwise be

<sup>141</sup> *Id.* at 3081-82; Daniel Fisher, *LegalZoom Sees Supreme Court Ruling as Tool to Challenge N.C. Bar*, FORBES (June 6, 2015), <http://www.forbes.com/sites/danielfisher/2015/06/06/legalzoom-sees-supreme-court-ruling-as-tool-to-challenge-n-c-bar/> [http://perma.cc/E8TW-YFRW]; Daniel Fisher, *LegalZoom Settles Fight With North Carolina Bar Over Online Law*, FORBES (Oct. 22, 2015), <http://www.forbes.com/sites/danielfisher/2015/10/22/legalzoom-settles-fight-with-north-carolina-bar-over-online-law/> [http://perma.cc/7MVN-5QCS].

<sup>142</sup> John O. McGinnis & Russell G. Pearce, *The Great Disruption: How Machine Intelligence Will Transform the Role of Lawyers in the Delivery of Legal Services*, 82 FORDHAM L. REV. 3041, 3042 (2014).

<sup>143</sup> *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, 620 F. App’x 37, 45 (2d Cir. 2015).

<sup>144</sup> Contrast this with the American Society of Anesthesiologists’ opposition to Johnson & Johnson’s robotic anesthesia machine, which the Society campaigned against, ultimately resulting in Johnson & Johnson “pulling the plug” because of poor sales. Todd C. Frankel, *It’s Game Over for the Robot Intended to Replace Anesthesiologists*, WASH. POST (Mar. 28, 2016), [http://www.washingtonpost.com/news/the-switch/wp/2016/03/28/its-game-over-for-the-robot-intended-to-replace-anesthesiologists/?utm\\_term=.489fc0ac74d3](http://www.washingtonpost.com/news/the-switch/wp/2016/03/28/its-game-over-for-the-robot-intended-to-replace-anesthesiologists/?utm_term=.489fc0ac74d3) [http://perma.cc/L7SW-M2GX].

<sup>145</sup> Noah Waisberg, *Implications of Lola v Skadden for Document Reviewers and Their Computer Replacements*, KIRA SYS. (Aug. 26, 2015), <http://info.kirasystems.com/blog/implications-of-lola-v-skadden-for-lawyers-practicing-document-review-and-machines-practicing-law> [http://perma.cc/V4UH-SUJH]. It should be noted that Mr. Waisberg posited that the answer is: “no.” *Id.*

performed entirely by a machine” do not qualify as the practice of law under UPL statutes.<sup>146</sup> But they state that while no courts have outright held that machine work is the unauthorized practice of law, “[f]ortunately, the court’s reasoning in *Lola* suggests a trend in legal ethics regarding new technology: where technology has created a fair and efficient solution, ethics will catch up.”<sup>147</sup> Nothing in the *Lola* decision, however, suggests or supports such a trend in legal ethics. In fact, considering that Judge Lohier’s *sua sponte* comments at oral argument must have been surprising for the arguing attorneys—especially given that nothing on this issue was even mentioned in either the appellate briefs or before the district court—it is more likely that the court simply did not consider long-term ethical ramifications at all. As we have already discussed, authorities charged with effectuating ethical rules within the legal profession have shown little sign to date of being able to simply “catch up.”

Over the past several years, a few state bars have tackled the issue, though not conclusively.<sup>148</sup> In a recent publication where the Tennessee Bar Association wrote a state-of-the-industry report on ethical issues surrounding artificial intelligence, that Bar Association did emphasize that *Lola* was an important decision for AI.<sup>149</sup> The Tennessee Bar also pointed out that state legislatures will likely take action, explaining that “[i]f courts hold that AI constitutes the unauthorized practice of law, legislatures may liberalize laws to specifically exclude such products as the practice of law.”<sup>150</sup> It gave the example of *Unauthorized Practice of Law Committee v. Parsons Technology, Inc.*, where a federal district court found that Parson’s Technology constituted the unauthorized practice of law by providing legal templates, and the Texas Legislature enacted a

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<sup>146</sup> Kathryn D. Betts & Kyle R. Jaep, *The Dawn of Fully Automated Contract Drafting: Machine Learning Breathes New Life into A Decades-Old Promise*, 15 DUKE L. & TECH. REV. 216, 232 (2017).

<sup>147</sup> *Id.*

<sup>148</sup> See, e.g., Pa. Bar Ass’n Unauthorized Practice of Law Comm., Formal Op. 2010-01, at 7 (2010), <http://www.pabar.org/public/committees/unautpra/Opinions/2010-01LglDocumentPreparation.pdf> [<http://perma.cc/D773-7LEQ>] (declaring any preparation of legal documents by a computer to be the unauthorized practice of law); Conn. Bar Ass’n Unauthorized Practice of Law Comm., Informal Op. 2008-01, at 3 (2008), [http://c.ymcdn.com/sites/ctbar.site-ym.com/resource/group/776a1a25-71dc-4190-95d2-4793e945208a/Unauthorized\\_Practice\\_of\\_Law\\_Committee/08-01.pdf](http://c.ymcdn.com/sites/ctbar.site-ym.com/resource/group/776a1a25-71dc-4190-95d2-4793e945208a/Unauthorized_Practice_of_Law_Committee/08-01.pdf) [<http://perma.cc/T9YR-F5GG>] (finding reasonable grounds to believe the web-based document-generation program “We The People” amounts to the unauthorized practice of law).

<sup>149</sup> W. Preston Battle IV, Nicole D. Berkowitz & George T. Lewis III, *Artificial Intelligence: State of the Industry and Ethical Issues*, TENN. B. J. ONLINE EXTRA, Mar. 2018, at 12, [http://www.tba.org/sites/default/files/tbj-online-extras-0318\\_0.pdf](http://www.tba.org/sites/default/files/tbj-online-extras-0318_0.pdf) [<http://perma.cc/S785-S6WK>].

<sup>150</sup> *Id.* at 15.

statute immediately after the appeal was filed in *Parsons Tech* “providing that the practice of law does not include the design, creation, publication, distribution, display or sale of computer software or similar products, as long as the products clearly and conspicuously state that they are not a substitute for the advice of counsel.”<sup>151</sup>

Thus, it can be argued that we are now experiencing a “*de facto* deregulation of the market for legal services,” to the “significant disadvantage of the legal profession.”<sup>152</sup> Watching the growth of legal services providers, whether through enabling technologies or lower-cost structures, it is hard to argue otherwise. According to statistics tracked by Professor Henderson, between 1999 and 2012, the U.S. Census Bureau category for law offices lost 63,000 jobs, while the sector for “All Other Legal Services” gained 17,000 jobs and “seem[ed] to be on a continuing upward trend.”<sup>153</sup> In 2017, the first Legal Executive Institute report on what it termed “alternative legal service providers” found that over 60% of corporate legal departments and 51% of law firms had made use of such providers,<sup>154</sup> representing an \$8.4 billion market.<sup>155</sup>

This occurred as far back as the 1996 date of Susskind’s first polemic: As he wrote then, “[l]egal publishers, accountants, consultants and entrepreneurs have already recognized the potential and snapped into action while most lawyers concoct complex rationalizations, explaining why none of this is desirable.”<sup>156</sup> Susskind went on to warn that “[t]he major commercial challenge here for lawyers in doing so is to retain their foothold as those who are the legal information engineers and suppliers of information because it is likely that new entrants to the market . . . may be keen to exploit this market.”<sup>157</sup>

<sup>151</sup> *Id.* (citing *Unauthorized Practice of Law Comm. v. Parsons Tech., Inc.*, 179 F.3d 956 (5th Cir. 1999) (per curiam); and TEX. GOV’T CODE ANN. § 81.101(a) (1998)).

<sup>152</sup> Benjamin Barton, *Good and Bad News from the ABA Futures Report (Perspectives)*, BIG L. BUS. (Sept. 6, 2016.), <http://biglawbusiness.com/good-and-bad-news-from-the-aba-futures-report-perspective> [http://perma.cc/PGG6-KX35].

<sup>153</sup> Marilyn Cavicchia, *Law Professor Bill Henderson Shares ‘Blueprint for Change’ with Bar Communicators*, ABA B. LEADER (2015), [http://www.americanbar.org/groups/bar\\_services/publications/bar\\_leader/2014-15/january-february/law-professor-bill-henderson-shares-blueprint-for-change-with-bar-communicators.html](http://www.americanbar.org/groups/bar_services/publications/bar_leader/2014-15/january-february/law-professor-bill-henderson-shares-blueprint-for-change-with-bar-communicators.html) [http://perma.cc/YZ5W-TTMB].

<sup>154</sup> LEGAL EXEC. INST., THOMSONREUTERS, ALTERNATIVE LEGAL SERVICE PROVIDERS 2 (2017), [http://static.legalsolutions.thomsonreuters.com/static/pdf/Alternative-Legal-Service-Providers\\_Long.pdf?mboxSession=1525140881589-86818](http://static.legalsolutions.thomsonreuters.com/static/pdf/Alternative-Legal-Service-Providers_Long.pdf?mboxSession=1525140881589-86818) [http://perma.cc/JF6G-FZ7L].

<sup>155</sup> *Id.* at 4.

<sup>156</sup> SUSSKIND, *supra* note 69, at xlv.

<sup>157</sup> *Id.* at 90.

The profession and its regulatory watchdogs have so far largely failed to confront the alternative service providers, a situation that makes Professor Barton compare lawyers to the proverbial “frog in a pot of slowly heating water.”<sup>158</sup> Lawyers and regulators only started paying attention when alternative providers such as LegalZoom started to climb up the “value chain” by providing an ultra-low cost alternative to routine corporate work, threatening actual losses to lawyers.<sup>159</sup> By that time, the pot was at full boil and, had the frog been paying better attention, it would have jumped. Taking the statistics from LegalZoom’s 2011 S-1 filing in anticipation of its planned (but cancelled) initial public offering shows just how it successfully lulled lawyers into sitting in very hot water, serving over two million customers in ten years for over \$156 million in revenue.<sup>160</sup>

So far, the strongest response by bar authorities has been to attempt to create alternative providers that they, not the market, control. Unfortunately, these attempts ended in failure. The most celebrated was the Washington Supreme Court’s enactment in June 2012 of a Limited Practice Rule for Limited Licensed Legal Technicians (“LLLTs”),<sup>161</sup> called by some “the most expansive model to date.”<sup>162</sup> The effort took nine years, beginning with a study in 2003,<sup>163</sup> and was pushed through by the Washington Supreme Court after the Washington State Bar Association voted to oppose the proposal.<sup>164</sup> The LLLT program

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<sup>158</sup> Barton, *The Lawyer’s Monopoly*, *supra* note 78, at 3082. As we will acknowledge further later, this proverb is in fact false: a frog will jump out of the water before it boils. See James Fallows, *The Boiled-Frog Myth: Stop the Lying Now!*, ATLANTIC (Sept. 16, 2006), <http://www.theatlantic.com/technology/archive/2006/09/the-boiled-frog-myth-stop-the-lying-now/7446/> [<http://perma.cc/HNX8-DDT7>].

<sup>159</sup> See BENJAMIN H. BARTON, *GLASS HALF FULL: THE DECLINE AND REBIRTH OF THE LEGAL PROFESSION* 90-91 (2015).

<sup>160</sup> See LegalZoom.com, Inc., Registration Statement (Form S-1) (May 10, 2012). These statistics go a long way toward making Susskind’s prediction in *Transforming the Law* that the majority of legal services would be performed online by 2015, while not necessarily true, much closer to reality than one might have expected.

<sup>161</sup> Stephen R. Crossland, *Limited License Legal Technician Program*, ABA NAT’L SUMMIT ON INNOVATION SERVICES 4 (May 4, 2015), [http://www.americanbar.org/content/dam/aba/images/office\\_president/stephen\\_crossland\\_programs\\_to\\_bridge\\_the\\_gap\\_slide.pdf](http://www.americanbar.org/content/dam/aba/images/office_president/stephen_crossland_programs_to_bridge_the_gap_slide.pdf) [<http://perma.cc/3273-6426>].

<sup>162</sup> Rigertas, *supra* note 119, at 2699.

<sup>163</sup> Crossland, *supra* note 161, at 2.

<sup>164</sup> Dan Kittay, *An Inside Look at Limited Practice for Nonlawyers in Washington And Other States*, 38 B. LEADER (Sept.-Oct. 2013), [http://www.americanbar.org/groups/bar\\_services/publications/bar\\_leader/2013-14/september-october/inside\\_look\\_limited\\_practice\\_nonlawyers\\_washington\\_other\\_states.html](http://www.americanbar.org/groups/bar_services/publications/bar_leader/2013-14/september-october/inside_look_limited_practice_nonlawyers_washington_other_states.html) [<http://perma.cc/X28Y-MV33>].

was featured in the ABA Report on the Future of Legal Services as a new form of innovation by the courts and as a recommendation for other states to implement.<sup>165</sup>

After Professor Barton examined the new rules for Washington LLLTs, he found that what was ostensibly presented as an easing of UPL regulations was, in fact, an attempt to further tighten the reigns. “In some ways the regulations are already stricter for LLLTs than lawyers . . . [I]t is an attempt to regulate *more* of the market for legal services, by essentially regulating paralegals.”<sup>166</sup> Thus, even as the great efforts that went into creating the LLLP program were celebrated, their failure was becoming increasingly clear: just fifteen candidates completed the coursework to become LLLTs in the first year.<sup>167</sup> Of those fifteen, only nine took the licensing exam and a mere seven passed.<sup>168</sup> This paltry showing contrasts with the 814 would-be lawyers who took the Washington bar exam around that same time.<sup>169</sup> The Practice of Law Board that had launched the program then publicly resigned.<sup>170</sup>

### ***B. Our Legal Structures Are Poorly Suited for Embracing Change***

Many have, for years, vigorously predicted the death of law firms, particularly the top 200 *American Lawyer* law firms. Late University of Illinois Professor Larry Ribstein became famous (or perhaps infamous) for these repeated predictions, beginning with the bluntly titled 2010 law journal article *The Death of Big Law*.<sup>171</sup> Yet, over eight years later, BigLaw is still here, and performing better than ever on every financial metric: gross revenue, revenue per lawyer, and profits per equity partner all increased each of the last five years for the majority of major law firms according to the 2017 Altman Weil survey.<sup>172</sup> Even Indiana University Law School professor William Henderson, who is also director of the Center on the Global Legal Profession at Indiana University and one of the late Professor Ribstein’s most

<sup>165</sup> See COMM’N ON THE FUTURE OF LEGAL SERVS., *supra* note 133, at 19-20, 23 & 73.

<sup>166</sup> BARTON, *supra* note 159, at 235; *see also* Crossland, *supra* note 161, at 7 (listing the restrictions).

<sup>167</sup> Robert Ambrogio, *Exam Results Released for Washington’s First Class of Legal Technicians*, LAW SITES (Sept. 20, 2016), <http://www.lawsitesblog.com/2015/06/exam-results-released-for-washingtons-first-class-of-legal-technicians.html> [<http://perma.cc/DY99-ZMB4>].

<sup>168</sup> *Id.*

<sup>169</sup> Barton, *supra* note 152.

<sup>170</sup> *Id.*

<sup>171</sup> Larry Ribstein, *The Death of Big Law*, 2010 WISC. L. REV. 749 (2010).

<sup>172</sup> Thomas Clay & Eric Seeger, *2017 Law Firms in Transition*, ALTMAN WEIL 77-78 (2017), [http://www.altmanweil.com/dir\\_docs/resource/90D6291D-AB28-4DFD-AC15-DBDEA6C31BE9\\_document.pdf](http://www.altmanweil.com/dir_docs/resource/90D6291D-AB28-4DFD-AC15-DBDEA6C31BE9_document.pdf) [<http://perma.cc/7JF8-S2LE>].

prominent enthusiasts, admits that Ribstein's pronouncements did not pan out. As he stated in 2013, "[t]hree years after the symposium that featured the Ribstein Death of Big Law critique, Big Law does not appear to be dead. In fact, Big Law is bigger."<sup>173</sup>

Unsurprisingly, Professor Susskind was also quite often met with strong skepticism and resistance over his two decades of trying to promote change, during which he had been called "dangerous" and "possibly insane."<sup>174</sup> At one point, the Law Society in Wales thought that Susskind should not be allowed to speak publicly.<sup>175</sup> Susskind, pithily, explains that one of the sources of this resistance is that it is "hard to convince a room full of millionaires that they've got their business model wrong."<sup>176</sup>

But as much as law firms have achieved great success individually, that does not add up to the kind of market power to make broad industry changes. As Professor Katz pointed out, the legal profession is simply too fragmented to foment rapid change. Even the biggest law firms in the world do not have a market share approaching even 0.5% of the legal industry. Per Katz, "When nobody has that much market share, and nobody can really have that much market share, then you can't change that fast. The industrial organization of the profession just won't allow for it." Expecting rapid change in this situation is unrealistic. "You would have to have the GCs of the 500 largest companies in America all get on the same page and simultaneously pursue the exact same strategy. And not just pursue it, but really, really cram down on people. But that's not realistic."<sup>177</sup>

The partnership business model used by law firms also impedes innovation and investment. Many have written about how systemic problems in the partnership model create a strong incentive to maximize present gains and strong disincentives to

<sup>173</sup> William D. Henderson, *From Big Law to Lean Law*, 3 INT'L REV L. & ECON. 5, 7 (2013).

<sup>174</sup> D. Casey Flaherty, *Job-Killing Legal Technologies? They Only Look That Way*, ABA LEGAL REBELS (Mar. 10, 2016, 8:30 AM CST), [http://www.abajournal.com/legalrebels/article/job\\_killing\\_legal\\_technologies](http://www.abajournal.com/legalrebels/article/job_killing_legal_technologies) [<http://perma.cc/BAE4-T7DQ>].

<sup>175</sup> Ian Lopez, *The (Human) Lawyer's Role in the Future of Legal (Part 2)*, LEGALTECH NEWS (Apr. 19, 2016, 3:02 PM), <http://www.law.com/legaltechnews/almID/1202755231670/> [<http://perma.cc/5X3B-CVGK>].

<sup>176</sup> David J. Parnell, *Richard Susskind: Moses to the Modern Law Firm*, FORBES (Mar. 21, 2014, 11:01 AM), <http://www.forbes.com/sites/davidparnell/2014/03/21/richard-susskind-moses-to-the-modern-law-firm/> [<http://perma.cc/997T-5G4Q>].

<sup>177</sup> Roy Strom, *Forming Future Progressives*, CHI. LAW. (Apr. 21, 2016), <http://www.chicagolawyer magazine.com/archives/2015/05/dan-katz-iit-chicago-kent> [<http://perma.cc/Q92K-N785>].

invest in the future.<sup>178</sup> Law firm partnerships (which close out their books each year), like public companies that report quarterly earnings, create timeframes and incentives that lead to inherently short-term thinking. “[N]o one who might be thought to be in the driving seat of the legal systems is thinking systematically, rigorously, and in a sustained way about the long-term future of legal service. No one seems to be worrying about the fate of the next generation of lawyers.”<sup>179</sup>

The typical age of equity law firm partners is over fifty, so this group does not have the same long-term interests as recent law graduates.<sup>180</sup> Older lawyers (i.e., those who are within ten years of retirement) are only half as likely to approve long-term investments (i.e., those with a five-year or longer payout) compared to those who expect to stay in the profession longer.<sup>181</sup> Moreover, the former came of age during the AI Winter, and are therefore perhaps understandably skeptical of the potential impact of advancements in technology. But this also just seems like human nature. After all, why would we expect anything different from those who expect to leave a firm before their investment finally provides a return? And that is not the end of where human nature—maybe better described as “lawyer nature”—fits into our problematic equation. Lawyers as a group present some nearly unique personality aspects that make them even more vulnerable to the effects of rapid change.

### *C. Our Very Nature as Lawyers Conspires Against Us*

The legal profession, as Professor Barton explains, is “backward looking,” such that, for lawyers, “[t]he past is the master of both the present and the future.”<sup>182</sup> Barton then goes on to lament that “[i]n most areas of the economy it is not acceptable to answer the question ‘Why is it done this way?’ with ‘We’ve always done it that way.’ In law that is not only an acceptable answer, it is the best and most basic answer.”<sup>183</sup>

<sup>178</sup> See, e.g., Katz, *supra* note 132, at 1:20, 7:17; Mark Cohen, *Law Firm Partners Prosper as their Model Falts*, LEGAL MOSAIC (Dec. 15, 2016), <http://legalmosaic.com/2016/12/15/law-firm-partners-prosper-as-their-model-falts/> [<http://perma.cc/8UH7-WR2G>].

<sup>179</sup> Richard Susskind, *Legal Informatics—A Personal Appraisal of Context and Progress*, 1 EUR. J. L. & TECH. 1 (2010).

<sup>180</sup> See, e.g., Katz, *supra* note 132, at 1:15; Stephen J. Harper, *Associate Pay and Partner Malfeasance*, BELLY OF THE BEAST BLOG (July 13, 2016), <https://thelawyerbubble.com/2016/07/13/associate-pay-and-partner-malfeasance/> [<https://perma.cc/T275-67MS>].

<sup>181</sup> Thomas Clay & Eric Seeger, *2016 Law Firms in Transition*, ALTMAN WEIL 20 (Apr. 2016), [http://www.altmanweil.com/dir\\_docs/resource/95e9df8e-9551-49da-9e25-2cd868319447\\_document.pdf](http://www.altmanweil.com/dir_docs/resource/95e9df8e-9551-49da-9e25-2cd868319447_document.pdf) [<http://perma.cc/3ZQY-6C64>].

<sup>182</sup> BARTON, *supra* note 159, at 174-75.

<sup>183</sup> *Id.* at 175; see also SUSSKIND, *supra* note 156, at 35 (explaining that the challenge of change for lawyers is to extend their facility for coping with legal

The latest annual Altman Weil “Law Firms in Transition” survey confirms this backwards looking viewpoint, as 65% of law firm leaders agreed that their “partners resist most change efforts” and 56% agreed that “most partners are unaware of what they might do differently.”<sup>184</sup> Still not convinced? Consider the response of just one law firm leader (the managing partner of an “AmLaw 50” firm for twenty years) to a question about whether technology will change the law: “If history is any indication, there will not be disruption.”<sup>185</sup>

To be fair, law firm leaders may remember people overhyping AI in the 1960s and 1970s, only to then experience the “AI Winter.” Thus, these lawyers may be well-justified in a belief that, when it comes to the new AI fanfare, this too shall pass. Meanwhile, their new-millennium generation counterparts barely blink at the news of an automated car, much less one that runs over a bystander.<sup>186</sup>

From where does this obsession with the past originate? Dr. Larry Richard, who has spent more than forty years studying lawyers’ personalities, found that they can be very different from the baseline population’s personalities.<sup>187</sup> Foremost among these differences is that lawyers score nearly twice as high for “skepticism” than others: at a score of ninety out of one hundred, versus fifty for the baseline.<sup>188</sup> Dr. Richard notes that the potentially negative behaviors associated with extreme skepticism are “quite functional and make a lot of sense” when one considers what lawyers do for a living—they could even be considered to be the elements of “critical thinking.”<sup>189</sup>

Yet, those potentially negative behaviors sound *exactly* like what one would not want to encounter in someone who needs to

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change to the management of change in the market place in which they work).

<sup>184</sup> Thomas Clay & Eric Seeger, *2017 Law Firms in Transition*, ALTMAN WEIL 14 (2017), [http://www.altmanweil.com/dir\\_docs/resource/90D6291D-AB28-4DFD-AC15-DBDEA6C31BE9\\_document.pdf](http://www.altmanweil.com/dir_docs/resource/90D6291D-AB28-4DFD-AC15-DBDEA6C31BE9_document.pdf) [<http://perma.cc/5D5Z-KNFQ>].

<sup>185</sup> Susan Beck, *The Future of Law*, AM. LAW. 30 (Aug. 2014), [http://documents.akerman.com/AmLaw\\_Innovation\\_29504636\\_v\\_1.PDF](http://documents.akerman.com/AmLaw_Innovation_29504636_v_1.PDF) [<http://perma.cc/5ZLE-UWDL>].

<sup>186</sup> See Daisuke Wakabayashi, *Self-Driving Uber Car Kills Pedestrian in Arizona, Where Robots Roam*, N.Y. TIMES (Mar. 19, 2018), <http://www.nytimes.com/2018/03/19/technology/uber-driverless-fatality.html> [<http://perma.cc/VKL6-FS3F>].

<sup>187</sup> See Larry Richard, *Herding Cats: The Lawyer Personality Revealed*, REP. TO LEGAL MGMT. 1 (Aug. 2002), <http://www.managingpartnerforum.org/tasks/sites/mpf/assets/image/MPF%20-%20WEBSITE%20-%20ARTICLE%20-%20Herding%20Cats%20-%20Richards1.pdf> [<http://perma.cc/A9MU-PSWJ>].

<sup>188</sup> Larry Richard, *The Lawyer Personality, Why Lawyers are Skeptical*, LAWYER BRAIN: WHAT MAKES LAWYERS TICK? (Feb. 11, 2013), <http://www.lawyerbrainblog.com/2013/02/the-lawyer-personality-why-lawyers-are-skeptical/> [<http://perma.cc/4Y4N-7392>].

<sup>189</sup> *Id.*

decide whether to make a long-term investment in technology that might or might not pay off: “People with a very high [s]kepticism score tend to look at the world through a ‘glass half empty’ lens—they focus on problems rather than on what’s working well; they tend toward the suspicious; they assume the worst . . . .”<sup>190</sup> Even worse, Dr. Richards finds that skepticism in lawyers increases over time “because lawyers work in a [s]keptical environment.”<sup>191</sup> Thus, the equity partners who need to make the decisions on long-term investments could well be the most skeptical lawyers in the firm—not surprising, considering how many times they have heard about “The Death of Big Law.”<sup>192</sup>

Other studies show that lawyers score higher than the regular population for not just skepticism, but outright pessimism; perhaps because pessimism is also often a helpful trait in their profession.<sup>193</sup> As psychiatrist Martin Seligman, who writes a blog called “Lawyers with Depression,” has found:

[P]essimists are losers on many fronts. But there is one glaring exception: Pessimists do better at law. We tested the entire entering class of the Virginia Law School in 1990 with a variant of the optimism-pessimism test. These students were then followed throughout the three years of law school. In sharp contrast with the results of prior studies in other realms of life, the pessimistic law students on average fared better than their optimistic peers.<sup>194</sup>

Moreover, Dr. Richard finds that lawyers score well outside of the baseline for a number of other traits that also do not seem to be particularly helpful for innovation. Lawyers score more than twenty points higher than normal for “urgency,”<sup>195</sup> which might at first seem like a useful trait when technology advances at exponential speed. Dr. Richard, however, tells us that high urgency scores are “characterized by impatience, a need to get things done, a sense of immediacy.”<sup>196</sup> Since technology investments often take many years to produce returns, this only

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<sup>190</sup> *Id.*

<sup>191</sup> *Id.*

<sup>192</sup> Ribstein, *supra* note 171.

<sup>193</sup> Martin Seligman, *Why Are Lawyers So Unhappy?*, LAWYERS WITH DEPRESSION (Nov. 16, 2007), <http://www.lawyerswithdepression.com/articles/why-are-lawyers-so-unhappy/> [<http://perma.cc/GNR4-ZY9G>].

<sup>194</sup> *Id.*

<sup>195</sup> Richard, *supra* note 187, at 5.

<sup>196</sup> *Id.* at 4.

further stacks the deck against law firms making such investments.

Lawyers also score abnormally low on “resilience,” described by Dr. Richard as “the degree to which a person bounces back quickly from criticism, rejection or setbacks.”<sup>197</sup> Creating, implementing, or investing in technology requires this trait; technology rarely works perfectly the first time. This is why Silicon Valley has engendered a culture of “fail fast, fail often” to succeed.<sup>198</sup> Lawyers, who generally lack the resilience to allow themselves fail even once, would have a much harder time succeeding in an environment that requires and even celebrates failure.

Finally, lawyers score extremely high on Dr. Richard’s tests for “autonomy,” what he calls the “herding cats” trait.<sup>199</sup> A high autonomy score “means that the person is more likely to be unresponsive to authority, find guidelines restricting, and dislike structured working environments.”<sup>200</sup> Again, this is not in and of itself necessarily a negative trait; some experts even describe this type of lawyer as “a lawyer’s lawyer.”<sup>201</sup> Automation, however, by its very nature requires that individuals relinquish some autonomy. Thus, combine high autonomy with high skepticism, high pessimism, high urgency, and low resilience, and we have created perhaps the perfect personalities to fall behind technologically driven disruption—regardless of intelligence or skill.

In the end, lawyers are likely to fixate on the past and avoid the uncertain future, while the opportunity to adapt to—and perhaps control—that future flies by them.

#### IV. *LOLA* IS JUST THE START OF SIGNIFICANT CHANGES TO AFFECT THE LEGAL PROFESSION STEMMING FROM THE RISE OF THE MACHINES

As the saying goes, “prediction is very difficult, especially about the future.”<sup>202</sup> Forecasts about the legal profession may be

<sup>197</sup> Larry Richard, *Resilience and Lawyer Negativity*, LAWYER BRAIN: WHAT MAKES LAWYERS TICK? (Sept. 19, 2002), <http://www.lawyerbrainblog.com/2012/09/resilience-and-lawyer-negativity/> [<http://perma.cc/9T67-E3DU>].

<sup>198</sup> John Donohue, *Fail Fast, Fail Often, Fail Everywhere*, NEW YORKER (May 31, 2015), <http://www.newyorker.com/business/currency/fail-fast-fail-often-fail-everywhere> [<http://perma.cc/5YL9-T29N>].

<sup>199</sup> Richard, *supra* note 187, at 7.

<sup>200</sup> Dan Pinnington, *Inside the Lawyer’s Mind: Autonomy*, SLAW (Apr. 20, 2015), <http://www.slw.ca/2015/04/20/inside-the-lawyers-mind-part-autonomy/> [<http://perma.cc/WF3W-F4QU>].

<sup>201</sup> *Id.*

<sup>202</sup> *It’s Difficult to Make Predictions, Especially About the Future*, QUOTE INVESTIGATOR (Oct. 20, 2013), <http://quoteinvestigator.com/2013/10/20/no->

even more difficult. “Scholars have addressed the automation of legal processes since at least the 1960’s. None foresaw all the critical developments of the past two decades and detailed prognostication is still a fool’s errand.”<sup>203</sup> Legal technology adds yet another degree of difficulty, such that even the most hailed experts like Susskind predicted that, “by 2015, the *main* way in which legal services [would be] delivered across the world [would] be through access to online legal service as opposed to consultation with human lawyers.”<sup>204</sup>

### ***A. The Predictions for the Future of the Legal Profession Are Troubling***

Some experts see lawyers as the “canaries in the coal mine” for AI-driven displacement.<sup>205</sup> MIT labor economist Frank Levy pointed to the fact that “there is a lot of legal work that is routine. . . . But that routine work, sifting through documents for relevant information, is wrapped in language, which had protected lawyers from the effects of automation, but no longer.”<sup>206</sup> Indeed, language is no longer a barrier because of advances in “natural language processing” (NLP) technologies, as emphasized in the most recent McKinsey & Company report on technology and employment.<sup>207</sup>

Not all experts, however, are so pessimistic. A frequently cited 2013 Oxford study proposed that lawyers are in a low-risk

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predict/ [http://perma.cc/H44C-HDQF]. It may be worth noting, within the context of the statement, that the statement has also been variously attributed to Yogi Berra, Mark Twain, Sam Goldwyn of MGM fame, and a historical Danish proverb, further proving how difficult it is to determine not just the future, but even the past. *See id.*

<sup>203</sup> Frank Pasquale & Glyn Cashwell, *Four Futures of Legal Automation*, 63 UCLA L. REV. DISC. 26, 28 (2015).

<sup>204</sup> SUSSKIND, *supra* note 70, at 29 (emphasis in original). Here, Susskind is referring to a prediction that he made in *The Future of Law* in 1996. Note that considering the success of online services such as LegalZoom, Susskind might not actually be all that wrong, even if he had originally intended to reference law firms as the providers.

<sup>205</sup> John Markoff, *The End of Lawyers? Not So Fast*, N.Y. TIMES (Jan. 4, 2016), <http://bits.blogs.nytimes.com/2016/01/04/the-end-of-work-not-so-fast/> [http://perma.cc/7TC6-H9U7].

<sup>206</sup> Steve Lohr, *Robots Will Take Our Jobs, but Not as Fast as Some Fear*, *New Report Says*, N.Y. TIMES (Jan. 12, 2017), <http://www.nytimes.com/2017/01/12/technology/robots-will-take-jobs-but-not-as-fast-as-some-fear-new-report-says.html> [http://perma.cc/TPJ5-HMNY] (quoting Frank Levy).

<sup>207</sup> See James Manyika et al., *A Future That Works: Automation, Employment, and Productivity*, MCKINSEY INSTITUTE 34-35, 72 (Jan. 2017), [http://www.mckinsey.com/~media/McKinsey/Global%20Themes/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works\\_Full-report.ashx](http://www.mckinsey.com/~media/McKinsey/Global%20Themes/Digital%20Disruption/Harnessing%20automation%20for%20a%20future%20that%20works/MGI-A-future-that-works_Full-report.ashx) [http://perma.cc/TUJ8-3TCG].

category for replacement by robots within the near term.<sup>208</sup> The same study predicted that out of 702 examined professions, lawyers were ranked near the top, with an only 3.5% chance of being replaced by computers.<sup>209</sup> Professors Simkovic and McIntyre, for example, see legal tasks as the stopping point for AI because they believe that the work requires complex thought and cannot be easily broken down.<sup>210</sup>

Frank Levy and University of North Carolina Law School Professor Dana Remus are similarly optimistic in their 2017 article *Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law*.<sup>211</sup> They do not foresee computer overlords looming over the legal profession anytime soon; instead, they focus on how “computers are changing—not simply replacing—the work of lawyers.”<sup>212</sup> Remus and Levy analyzed the tasks that could be replaced with automation by using billing data from a commercial time tracking database to determine what level of attorney was most likely to do the work.<sup>213</sup> They divided the tasks into three levels and predicted the labor-replacement impact for each: (1) “Strong,” a category that contains automated document review, would experience about an 85% reduction in employment; (2) “Moderate,” consisting of a broad spectrum of tasks that include case management, document drafting, due diligence, legal research, legal analysis, and strategy, would experience about a 19% reduction in employment; and (3) “Light,” consisting of document management, legal writing, fact investigation, advising clients, other communications, court appearances, and negotiations, would experience about a 5% reduction in employment.<sup>214</sup>

In other tasks beyond e-discovery, however, Remus and Levy fail to account for the inevitable exponential improvement of technology. Scholars have many times predicted that machines could not replace humans in certain areas, and have been subsequently proven wrong. For example, in 2004, Levy and his then-co-author Richard J. Murnane predicted that computers would not substitute human drivers. Then, in 2010 Google announced its breakthroughs in self-driving cars.<sup>215</sup> Levy and

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<sup>208</sup> CARL BENEDIKT FREY & MICHAEL A. OSBORNE, THE FUTURE OF EMPLOYMENT: HOW SUSCEPTIBLE ARE JOBS TO COMPUTERISATION? 41 (2013), <http://www.oxfordmartin.ox.ac.uk/downloads/academic/future-of-employment.pdf> [<http://perma.cc/8GG6-FWR7>].

<sup>209</sup> *See id.* at 59.

<sup>210</sup> Simkovic & McIntyre, *supra* note 68, at 275.

<sup>211</sup> Dana Remus & Frank Levy, *Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law*, 30 GEO. J. LEGAL ETHICS 501 (2017).

<sup>212</sup> *Id.* at 505.

<sup>213</sup> *Id.* at 532.

<sup>214</sup> *Id.* at 533-36.

<sup>215</sup> GEOFF COLVIN, HUMANS ARE UNDERRATED: WHAT HIGH ACHIEVERS KNOW THAT BRILLIANT MACHINES NEVER WILL 40 (2015).

Murnane also predicted that “complex communication” skills could not be replicated, just seven years before Apple introduced Siri in 2011.<sup>216</sup> As we will later explore, some of the more specific predictions that Remus and Levy make about the legal profession may also be proven wrong.

Thus, even though many pundits claim that the role of computers is merely to supplement human work, such augmentation can only go so far before the human element becomes unnecessary. MIT economist David Autor states, “There is no reason to think that technology creates unemployment . . . . Over the long run we find things for people to do. The harder question is, does changing technology always lead to better jobs? The answer is no.”<sup>217</sup>

### ***B. The Emergence of The Winner-Take-All Economy Magnifies Disruption***

Although it would be easy to blame the displacement of lawyers on technology alone, that would ignore the impact of the development over the last several decades of what economists call the “winner-take-all” economy. The fundamental concept behind the winner-take-all economy comes from a 1981 essay by Sherwin Rosen, *The Economics of Superstars*, where he explains how those at the top get farther ahead, while those at the bottom and often even in the middle fall farther and farther behind.<sup>218</sup> He does not describe a gradual or well-distributed bell curve, but rather a massively imbalanced situation with a severe drop-off beyond the first few extreme winners. Rosen found that this imbalance applied in many economic sectors, such as music, movies, and sports.<sup>219</sup>

Rosen’s ideas were later popularized by Robert Frank and Philip Cook, in their 1985 book *The Winner-Take-All Society*, which found that the inequalities “appear to explain the growth of top incomes in the legal profession.”<sup>220</sup> Thirty-three years ago, however, the impact of such inequalities was only visible at the top of the profession. Thus, Frank and Cook write that, on the lower end of the legal profession, “even ordinary lawyers don’t fare poorly, and indeed the *least*-well-paid lawyers appear to

<sup>216</sup> ERIK BRYNJOLFSSON & ANDREW MCAFEE, *THE SECOND MACHINE AGE: WORK, PROGRESS, AND PROSPERITY IN A TIME OF BRILLIANT TECHNOLOGIES* 20, 22 (2016).

<sup>217</sup> John Markoff, *Armies of Expensive Lawyers, Replaced by Cheaper Software*, N.Y. TIMES (Mar. 4, 2011), <http://www.nytimes.com/2011/03/05/science/05legal.html> [http://perma.cc/GV5L-YTX4].

<sup>218</sup> Sherwin Rosen, *The Economics of Superstars*, 71 AM. ECON. REV. 845 (1981).

<sup>219</sup> *Id.*

<sup>220</sup> ROBERT FRANK AND PHILIP COOK, *THE WINNER-TAKE-ALL SOCIETY* 97 (1995).

earn more than most other people. Popular culture makes little reference to a ‘starving lawyer’ syndrome.”<sup>221</sup>

This state of affairs did not last. One of the central premises of *The Second Machine Age* by Brynjolfsson and McAfee is that technology has served as a force to dramatically increase the growing inequalities premised by Frank and Cook.<sup>222</sup> Building upon this, Professors McGinnis and Pierce foresee a great future for legal-industry superstars to “extend their research through technology: they deliver their innovative solutions to problems faster and to a broader range of clients.”<sup>223</sup> Likewise, industry expert Peter MacMillan also focuses on the rosy future for the stars: “In certain parts of the legal industry, the smart money will increasingly be on those legal experts on whom the profitability of future law firms will be built . . . .”<sup>224</sup>

For firms that make those smart-money bets, the payout can be incredible. The average AmLaw 100-200 firm’s profits per partner have grown from \$324,500 in 1987<sup>225</sup> to \$1,661,772 in 2017,<sup>226</sup> nearly nine times today’s first-year salary. Yet, the distribution across the AmLaw 100-200 is far from even. As Brynjolfsson and McAfee have noted, “[i]n many industries, the difference in pay out between number one and the second best has widened into a canyon.”<sup>227</sup> Experts have noted that “[f]or years the Am Law 200 results have shown a deepening chasm between the most elite firms and the rest.”<sup>228</sup> Legal economics expert Bruce MacEwan has highlighted the huge differences between the top 20 or so firms in the AmLaw 100-200 and the remaining 180, finding that “the AmLaw 100 is not remotely a “normal” distribution; it’s a power curve, with a few big players, a lot more in the middle, and a long tail of smaller fry.”<sup>229</sup> Per MacEwan, just the top three firms alone account for 10% of the

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<sup>221</sup> *Id.* at 111.

<sup>222</sup> See BRYNJOLFSSON & MCAFEE, *supra* note 216, at 152-55.

<sup>223</sup> McGinnis & Pearce, *supra* note 142, at 3054.

<sup>224</sup> Peter MacMillan, *Robot Lawyers Are Not the Future*, LINKEDIN (Jan. 7, 2016), <http://www.linkedin.com/pulse/robot-lawyers-future-dr-peter-macmillan> [<http://perma.cc/K6GY-9EXW>].

<sup>225</sup> Joe Patrice, *Putting PPP in Historical Perspective*, ABOVE THE LAW (June 29, 2016), <http://abovethelaw.com/2016/06/putting-ppp-in-historical-perspective/> [<http://perma.cc/NW27-U6AS>].

<sup>226</sup> Bruce MacEwan, *What Do the AmLaw Numbers Really Show?*, ADAM SMITH, ESQ. (Oct. 5, 2017), <http://adamsmithesq.com/2017/10/what-do-the-amlaw-numbers-really-show/> [<http://perma.cc/H9QZ-HGMB>].

<sup>227</sup> BRYNJOLFSSON & MCAFEE, *supra* note 216, at 148.

<sup>228</sup> Gina Passarella, *Can Firms in The Am Law 51-100 Keep From Falling Further Behind?*, AM. LAW. (Apr. 26, 2017), <http://www.law.com/americanlawyer/almID/1202784499899/> [<http://perma.cc/RF7D-REYD>].

<sup>229</sup> MacEwan, *supra* note 226.

revenues of the AmLaw 100, and the top nine represent 25% of that number.<sup>230</sup>

As the struggle between law firms grows, so does intra-firm competition. The average gap between the highest- and lowest-paid partners in AmLaw 100-200 firms was around 3-to-1 in 1985.<sup>231</sup> By 2016, the average gap was 11.7-to-1.<sup>232</sup> Despite dire warnings from law firm compensation experts,<sup>233</sup> for some firms, the ratio between highest and lowest paid partners has grown even higher, including one firm that reported a 30-1 gap and several that reported numbers nearly as high, leading experts to claim that “[t]he legal profession has never been more cutthroat.”<sup>234</sup>

The growing gulf in equity partner pay ratios glosses over the fact that reaching the equity rank is an increasingly remote goal for most: “if you’re an AmLaw 100 associate . . . your prospects of partnership just went from dim to laughable; someone’s going to have to die (or retire) first.”<sup>235</sup> Most major firms now have a two-tier partnership structure, where promotion does not necessarily yield equity. In 1995, just over one-third of major firms had an income or non-equity partner tier; now, 82% of major firms do.<sup>236</sup> After years of fewer and fewer promotions of income partners into the equity partner ranks, the number of equity partners actually declined by 0.6% in 2016.<sup>237</sup>

For those who do not make it to the top, the future appears less rosy. Total associate headcount at AmLaw 100-200 firms has decreased by 1.3% in recent years, while the “other,” non-partner-track, attorney category increased by 17.2%.<sup>238</sup> The

<sup>230</sup> *Id.*

<sup>231</sup> See Steven Harper, *Treating Symptoms; Ignoring the Disease*, BELLY OF THE BEAST, (June 1, 2017), [http://thelawyerbubble.com/category/law-and-medicine/\[http://perma.cc/SF8C-5LF5\]](http://thelawyerbubble.com/category/law-and-medicine/[http://perma.cc/SF8C-5LF5]).

<sup>232</sup> See Nell Gluckman, *Changing Compensation Strategies Put Partners Under Pressure*, LAW J. NEWSLETTERS (June 2017), <http://www.lawjournalnewsletters.com/sites/lawjournalnewsletters/2017/06/01/changing-compensation-strategies-put-partners-under-pressure-2/?slreturn=20180313001547> [<http://perma.cc/2PDF-3XXQ>].

<sup>233</sup> See, e.g., Patrick J. McKenna & Edwin B. Reeser, *Sliced Too Thin*, AM. LAW. (May 31, 2012), [http://www.law.com/americanlawyer/almID/1202555054180/\[http://perma.cc/U2ET-EYJM\]](http://www.law.com/americanlawyer/almID/1202555054180/[http://perma.cc/U2ET-EYJM]).

<sup>234</sup> *Id.*

<sup>235</sup> Bruce MacEwan, *A Take on the 2016 AmLaw 100*, ADAM SMITH, ESQ. (May 3, 2016), [http://adamsmithesq.com/2016/05/a-take-on-the-2016-amlaw-100/\[http://perma.cc/6EWP-WKKF\]](http://adamsmithesq.com/2016/05/a-take-on-the-2016-amlaw-100/[http://perma.cc/6EWP-WKKF]).

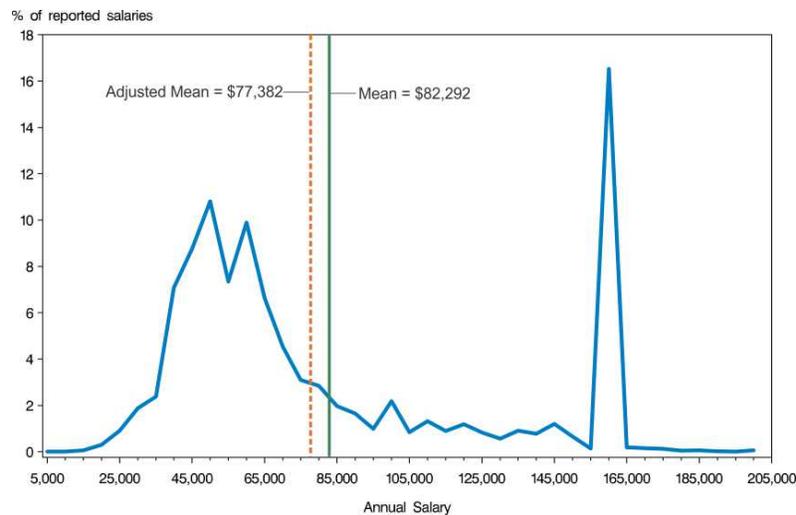
<sup>236</sup> Brian Dalton, *Stats of the Week: The Last of the True BigLaw Partnerships*, ABOVE THE LAW (May 1, 2016), <http://abovethelaw.com/2016/04/stats-of-the-week-the-last-of-the-true-biglaw-partnerships/> [<http://perma.cc/T8SS-9FD3>].

<sup>237</sup> MacEwan, *supra* note 235.

<sup>238</sup> William D. Henderson, *From Big Law to Lean Law*, 38 INT’L REV. L. & ECON. (SUPPLEMENT) 5, 8 (2014).

annual Citi/Hildebrandt report, which has been reporting in exhaustive detail on BigLaw trends for years, states that it expects the growth of inequality within the ranks will only increase. “The majority of firms are also planning to increase the use of less expensive non-partner track lawyers . . . [and] planning to rely more on contract lawyers, which would enable firms to effectively shift a fixed cost to a variable cost, one that can be ramped up and scaled back as needed.”<sup>239</sup>

Outside the well-compensated confines of BigLaw, the inequality becomes even more glaring. Professor Barton’s book *Glass Half Full: The Decline and Rebirth of the Legal Profession* cites to three graphs from National Association for Law Placement (“NALP”), charting starting lawyer salaries from 1996, 2006, and 2011 and demonstrating just how wide the gap has become.<sup>240</sup> The most recent NALP chart, from 2014, shows a very small group that starts at around \$160,000 per year, dropping into a virtual canyon at intermediate income levels until jumping up again to represent the majority of lawyers who start within the \$50-60,000 per year salary range<sup>241</sup>:



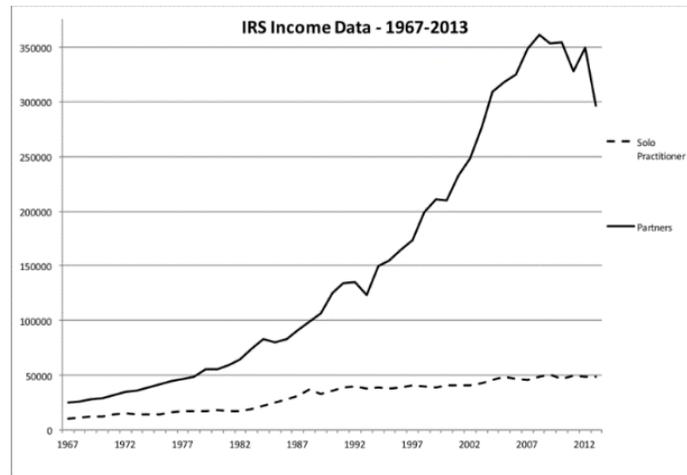
© NALP, 2015  
www.nalp.org

<sup>239</sup> *Citi/Hildebrandt 2016 Client Advisory*, CITI/HILDEBRANDT 11 (2015), <http://www.privatebank.citibank.com/pdf/2016CitiHildebrandtClientAdvisory.pdf> [<http://perma.cc/MY5S-DNEM>]; see also Daniel Thies, *Rethinking Legal Education in Hard Times: The Recession, Practical Legal Education, and the New Job Market*, 59 J. LEGAL EDUC. 598, 603 (2010) (“[F]irms are shifting as much work as possible to lower paid staff attorneys or contract attorneys, while employing fewer high paid associates.”).

<sup>240</sup> BARTON, *supra* note 159, at 42-46.

<sup>241</sup> *NALP Distribution of Reported Full-Time Salaries—Class of 2014*, NALP, <http://www.nalp.org/salarydistrib> [<http://perma.cc/EGN9-WCFQ>].

That gap only gets worse over time. Professor Barton’s book includes the following chart from research that he has performed on Internal Revenue Service tax return data about how the revenues of lawyers in law firm partnerships have vastly outpaced the revenues of solo lawyers<sup>242</sup>:



Barton states that “the majority of American lawyers who work in small firms or as solo practitioners have faced grim prospects since the mid-1980s. Since then, solo practitioners have seen a 37 percent decline in real income . . . [and] the average solo practitioner earned \$46,560 in 2010.”<sup>243</sup>

Despite the glaring disparity between the two spikes in the above chart, the inequality is even worse for many lawyers. As per comments by the ABA Standing Committee on the Delivery of Legal Services (the Standing Committee) to the Commission on the Future of Legal Services: “a Boston law firm advertised in 2011 for associates, offering them annual salaries of just \$10,000, which is \$1,490 below the Federal Poverty Guidelines for an individual. The firm had 50 applicants.”<sup>244</sup> Indeed, for those who find themselves working for one-third of the pay of their peers, professors McGinnis and Pearce note that these “journeymen lawyers—such as those who write routine wills, vet house closings, write standard contracts, and review documents—face a much bleaker future, because machines will do many such routine legal tasks.”<sup>245</sup>

<sup>242</sup> See BARTON, *supra* note 159, at 5.

<sup>243</sup> *Id.* at 4.

<sup>244</sup> ABA STANDING COMM. ON THE DELIVERY OF LEGAL SERVS., COMMENTS TO ISSUES PAPER CONCERNING NEW CATEGORIES OF LEGAL SERVICE PROVIDERS 3 (Dec. 31, 2015), [http://www.americanbar.org/content/dam/aba/images/office\\_president/will\\_hornsby.pdf](http://www.americanbar.org/content/dam/aba/images/office_president/will_hornsby.pdf) [<http://perma.cc/MY5S-DNEM>].

<sup>245</sup> McGinnis & Pearce, *supra* note 142, at 3042.

An analysis cited by Brian Tamanaha, law professor and former interim dean of St. John's Law School, estimated that only 19,397 lawyer jobs were available annually from 2008-2010, which was less than half of the number of law school graduates in those years.<sup>246</sup> Surveys support Tamanaha's estimates: less than half of the 7,000 participants of a recent ABA-sponsored poll of the alumni of seven southeastern U.S. law schools who received their degree from 2000-2015 say they had a "good job" waiting for them after they completed their law degree, compared with more than 60% of graduates in 1980-1999 and over 70% of 1960-1979 graduates.<sup>247</sup>

And for those who cannot find a job within the law? As more and more of these recent, unlucky graduates have been forced to turn to jobs outside of what was once considered to be typical legal employment, the industry has tried to normalize this trend, such as through NALP's promoting the potential for "alternative" careers.<sup>248</sup> Consider how someone who spent three years in law school and incurred a debt of \$140,616<sup>249</sup> would feel at one of these roles: "carpentry and remodeling, driving school, flight attendant, landscape design, law exam proctor, middle school Spanish teacher, minister, muffler business, plumber, and teacher at a nursing school."<sup>250</sup>

### ***C. The Profession Is on an Ugly Collision Path with Exponential Technology Growth and Economic Inequality***

When discussing the dismal future of e-discovery tasks, Remus and Levy are clearly on point with their findings of high-level displacement already in progress. According to e-discovery company Kroll (now part of KLDDiscovery), the past few years

<sup>246</sup> BRIAN TAMANAHA, FAILING LAW SCHOOLS 73 (2012).

<sup>247</sup> GALLUP & ACCESSLEX INSTITUTE, LIFE AFTER LAW SCHOOL 6, 8, (2016), [http://www.accesslex.org/sites/default/files/2017-04/life\\_after\\_law\\_school.pdf](http://www.accesslex.org/sites/default/files/2017-04/life_after_law_school.pdf) [<http://perma.cc/APV2-QCA4>].

<sup>248</sup> BARTON, *supra* note 159, at 128.

<sup>249</sup> This number is based upon the average law school debt in 2012, the year when the NALP published this list of "alternative careers." See Josh Mitchell, *Grad-School Loan Binge Fans Debt Worries*, WALL STREET J. (Aug. 18, 2015), <http://www.wsj.com/articles/loan-binge-by-graduate-students-fans-debt-worries-1439951900> [<http://perma.cc/7W2C-LAT7>]; Staci Zaretsky, *How Are Lawyers Managing Their Law School Debt? Most Will Never Be Able To Pay It Off*, ABOVE THE LAW (Aug. 26, 2015), <http://abovethelaw.com/2015/08/how-are-lawyers-managing-their-law-school-debt-most-will-never-be-able-to-pay-it-off/?rf=1> [<http://perma.cc/2YHP-YY4D>].

<sup>250</sup> BARTON, *supra* note 159, at 128. Just in case you were wondering what the answer to that question was, Barton goes on to state what one would suspect: "These are fine and enjoyable occupations, but do not seem likely to benefit enough from a law school education to justify the expense and lost time of a JD."

have seen the average number of reviewers needed per project drop dramatically, from thirty-two contract lawyers in 2010 to just eleven in 2014.<sup>251</sup> At the same time, the average number of document pages that have needed human review also dropped from 5.3 million in 2008 to 1.5 million in 2014.<sup>252</sup> As data creation is not declining, this can only mean that machines are undertaking a greater role in the culling and, at least initial, analysis of these documents.

The fact that e-discovery was such an early target for displacement by computer systems should not come as a surprise, as the tasks can be performed at a low level. That might be a painful admission for those who rely upon such work, as David Lola once did, but it coincides with one of the few thorough studies that have been performed on temporary document-review attorneys. Robert Brooks, a professor at Worcester State University, worked on seventeen projects at nine different firms over nearly four years and, during this process, interviewed twenty temporary document-review attorneys.<sup>253</sup> He found that “the work did not require a great deal in the way of legal skills.”<sup>254</sup> Going beyond such studies, the stories that reviewers tell illustrate all-too-well how Professor Brooks’ findings were, if anything, understated. Consider the following quotes:

- “You almost never do any actual ‘lawyering’ while you are working. The work is mindless, and that’s partially why it’s terrible. So while the document review work is not only detrimental to your sense of self-worth, it is also keeping you from developing any skills that will help you as an attorney.”<sup>255</sup>
- “[A] contract attorney’s livelihood is based on the rote task of clicking a mouse . . . . There is a difference between coding a document correctly and coding a document how the project manager or associate wants it done. Insistence on the former will get you cut from a project quicker than you can say ‘but I’m right.’”<sup>256</sup>

<sup>251</sup> *The Ediscovery.com Pulse Benchmarks*, KROLL ONTRACK 3 (Dec. 2015).

<sup>252</sup> *Id.*

<sup>253</sup> ROBERT A. BROOKS, *CHEAPER BY THE HOUR: TEMPORARY LAWYERS AND THE DEPROFESSIONALIZATION OF THE LAW* xi-xii (2011).

<sup>254</sup> *Id.* at 72 (emphasis omitted).

<sup>255</sup> Tyler White, *The Deal with the Document Review Devil*, *LAWYERIST* (July 21, 2011), <http://lawyerist.com/deal-document-review-devil/> [<http://perma.cc/4SUV-6UVM>].

<sup>256</sup> Alex Rich, *7 Signs You’ve Been Doing Document Review Too Long*, *ABOVE THE LAW* (Nov. 13, 2013, 11:06 AM), <http://abovethelaw.com/2013/11/7-signs-youve->

- “I have been working as a document review attorney since 2011. . . . I am an Ivy League educated single mother with over 15 years’ experience in the legal industry. . . . I did everything right and I have been completely left behind . . . . I lost my house to foreclosure and I was unable to pay my student loans—causing the interest to compound annually and my debt to rise higher than the initial amount I’d borrowed. I feel used, abused, lied to, forgotten, disdained and cast aside.”<sup>257</sup>

Considering the current difficult conditions for many lawyers, it should not be surprising that, no matter how “unprestigious,” uninteresting, and unlikely to lead to real work e-discovery document-review work may be, there has been little difficulty finding lawyers to fill those jobs. As the head of one program run within a law firm explained, “After advertising for one position, the applications poured in. The market is glutted with excellent new lawyers who can’t get jobs.”<sup>258</sup> In fact, there was a time when such tasks were a typical part of any law firm associate’s job. As Judge Sullivan mentioned in the pre-motion-to-dismiss hearing for the underlying *Lola* case when the discussion turned to document review: “It’s hard to say that description doesn’t match what a lot of young lawyers do.”<sup>259</sup> Judge Sullivan then re-emphasized this in his opinion: “As junior associates at law firms well know, these tasks are the bread and butter of much legal practice . . . .”<sup>260</sup>

But as we have seen, even those bread-and-butter tasks are disappearing. And, if *Lola* is right, these tasks will also be leaving the “practice of law.” Even the most optimistic e-discovery experts echo the story of the ever-diminishing world of the document-review attorney. For example, Ralph Losey, an e-discovery innovator and prolific author, has good reason to relish

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been-doing-document-review-too-long/ [http://perma.cc/5J5D-5NPF].

<sup>257</sup> See Mirene Charles, Comment on Proposed Rule: Defining and Delimiting the Exemptions for Executive, Administrative, Professional, Outside Sales and Computer Employees (Sept. 3, 2015), <http://www.regulations.gov/document?D=WHD-2015-0001-4161> [http://perma.cc/GTS5-KEQF].

<sup>258</sup> Daniel Fish, *The Lucrative Days of Document Review Are Over*, PRECEDENT (Mar. 7, 2017), <http://lawandstyle.ca/law/cover-story-the-lucrative-days-of-document-review-are-over/> [http://perma.cc/383V-MFTQ] (internal quotation marks omitted).

<sup>259</sup> Transcript of Conference Proceedings at 10, *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 13-CV-5008 (S.D.N.Y. Oct. 31, 2013) (No. 30).

<sup>260</sup> *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, No. 13-CV-5008 RJS, 2014 WL 4626228, at \*14 (S.D.N.Y. Sept. 16, 2014), *vacated and remanded*, 620 F. App’x 37 (2d Cir. 2015).

the power that AI-enhanced e-discovery systems give him when he recounts that he “can do the work of one hundred linear reviewers with no problem, by using a software AI enhancement.”<sup>261</sup> But one has to wonder about the implications of Mr. Losey going on to promise that “[i]t’s not going to put lawyers out of work, but it is going to reduce the volume of menial tasks in the law.”<sup>262</sup> For Mr. Losey, the powerful new AI e-discovery software has indeed reduced the volume of menial tasks; but, for those ninety-nine other attorneys who used to do the work, it has instead reduced their job prospects.

E-discovery review is not the only rapidly expiring legal task. As the famous Internet entrepreneur Marc Andreessen infamously said, “software is eating the world.”<sup>263</sup> Other tasks such as contract drafting and review, along with due diligence—both labeled by Remus and Levy as having a “moderate” (19%) chance of being displaced—are now being devoured by automation. Starting with contract review, major law firms have been building in-house contract-assembly systems for some time.<sup>264</sup> For example, the Silicon Valley firm Fenwick & West developed a system in 2010 that automatically creates startup incorporation documents.<sup>265</sup> The CEO of Fenwick was quoted as saying, “It reduced the average time we were spending from about 20 to 40 hours of billable time down to a handful of hours.” Fenwick’s CEO continued, “In cases with even extensive documents, we can cut the time of document creation from days and weeks to hours.”<sup>266</sup> Such stories led Professor McGinnis, along with Fordham Law School Professor Russell G. Pearce, to predict in 2014 that, within ten to fifteen years, computer-based services would generate the first draft of most transactional documents.<sup>267</sup>

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<sup>261</sup> Doug Austin, *Ralph Losey of Jackson Lewis, LLP: eDiscovery Trends*, CLOUDNINE (Mar. 9, 2016), <http://www.ediscovery.co/ediscoverydaily/electronic-discovery/ralph-losey-of-jackson-lewis-llp-ediscovery-trends-3/> [<http://perma.cc/77L6-585N>].

<sup>262</sup> *Id.*

<sup>263</sup> Marc Andreessen, *Why Software Is Eating the World*, WALL STREET J. (Aug. 20, 2011), <http://www.wsj.com/articles/SB10001424053111903480904576512250915629460> [<http://perma.cc/8AYL-RD4U>].

<sup>264</sup> See RICHARD SUSSKIND, *THE END OF LAWYERS?* 103 (2008).

<sup>265</sup> Farhad Manjoo, *Legal Software: Automation Could Kill Lawyers. Why That's Good for Everyone Else*, SLATE (Sept. 29, 2011, 2:42 AM), [http://www.slate.com/articles/technology/robot\\_invasion/2011/09/will\\_robots\\_steal\\_your\\_job\\_5.html](http://www.slate.com/articles/technology/robot_invasion/2011/09/will_robots_steal_your_job_5.html) [<http://perma.cc/NZ7D-N589>].

<sup>266</sup> *Id.*

<sup>267</sup> McGinnis & Pearce, *supra* note 142, at 3051. Not everyone, including some very well-known names, however, would agree. See Ezra Klein, *Bill Gates: The Energy Breakthrough that will “Save Our Planet” Is Less than 15 Years Away*, VOX (Feb. 24, 2016, 8:30 AM), <http://www.vox.com/2016/2/24/11100702/bill-gates-energy> [<http://perma.cc/ZKZ6-VGFS>] (“[T]here’s what we think of as

There is a possibility, however, that McGinnis and Pearce may have been off by a few years in their timeline. LawGeex, an Israel-based contract analytics company, recently published a study that dramatically demonstrated how its product was more accurate than lawyers at performing contract-assessment work on a sample set of non-disclosure agreements (“NDAs”), with an average accuracy of 94% versus an average accuracy rate of 85% for the lawyers.<sup>268</sup> Even more impressive was how much faster the LawGeex system was than the lawyers; while lawyers took an average of ninety-two minutes to review five NDAs, the AI system needed only twenty-six *seconds*.<sup>269</sup>

Gillian Hadfield, Professor of Law and Economics at the University of Southern California, who advised on the test, explained how it might “actually understate the gain from AI in the legal profession” because “[t]he lawyers who reviewed these documents were fully focused on the task: it didn’t sink to the bottom of a to-do list, [and] it didn’t get rushed through while waiting for a plane or with one eye on the clock to get out the door to pick up the kids.”<sup>270</sup> Thus, according to Professor Hadfield, “[t]he margin of efficiency is likely to be even greater than the results shown here.”<sup>271</sup> While contract-drafting guru Ken Adams, author of the ABA’s best-seller *A Manual of Style for Contract Drafting*, had some criticisms of the limited scope of the study, even he cautiously conceded that the “product has the potential to make contract review quicker and more effective.”<sup>272</sup>

Like contract-analytics systems, due diligence review systems have been used at law firms, such as Berwin Leighton

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‘intelligent activities’—things like writing contracts, or doing diagnoses, or writing software code. When will the computer start to infringe? ‘Infringe’ is a pejorative word. When will it start to have the capacity to work in those areas? Some might say 30 years—I might be there. Some might say 60 years. Some might not even say that.”).

<sup>268</sup> *Comparing the Performance of Artificial Intelligence to Human Lawyers in the Review of Standard Business Contracts*, LAWGEEX 2 (Feb. 2018), <http://images.law.com/contrib/content/uploads/documents/397/5408/lawgeex.pdf> [<http://perma.cc/268C-CEKG>]; see also Roy Strom, *The Law Firm Disrupted: What Lawyers Will Go from Grunt to Great*, LAW.COM (Mar. 6, 2018, 2:32 PM), <http://www.law.com/2018/03/01/the-law-firm-disrupted-what-lawyers-will-go-from-grunt-to-great/> [<http://perma.cc/KK6B-7FGH>] (“LawGeex . . . released a study this week that showed lawyers are probably wasting their time by manually reviewing non-disclosure agreements.”).

<sup>269</sup> See Strom, *supra* note 268.

<sup>270</sup> *LawGeex Hits 94% Accuracy in NDA Review vs 85% for Human Lawyers*, ARTIFICIAL LAW. (Feb. 26, 2018), <http://www.artificiallawyer.com/2018/02/26/lawgeex-hits-94-accuracy-in-nda-review-vs-85-for-human-lawyers/> [<http://perma.cc/5VEV-7823>].

<sup>271</sup> *Id.*

<sup>272</sup> Ken Adams, *Automated Review of Contracts: Some Thoughts on LawGeex’s AI-Versus-Humans Study*, ADAMS ON CONT. DRAFTING (Mar. 13, 2018), <http://www.adamsdrafting.com/lawgeex-ai-versus-humans-study/> [<http://perma.cc/9SMF-MFUQ>].

Paisner, for years. The systems are “used . . . in some specific contexts and are [being extended] to additional legal practices and increasingly complex documents. Depending on the complexity of the underlying documents and the data required, this is either a fully automated task or one undertaken in an augmented manner with due diligence personnel.”<sup>273</sup>

Further, it appears that due diligence is on the brink of a technological revolution similar to that which caused “high” displacement within e-discovery. AI-based due diligence review systems such as Kira have scored impressive sales wins in the last few years among law firms and corporate legal departments.<sup>274</sup> The Director of Legal Services Innovation for Freshfields noted that Kira has given the firm efficiency gains of up to 70%.<sup>275</sup> The success of Kira and similar companies such as Luminance, LegalSifter, and eBrevia have caused even mainstream media like CNBC to warn that “the cash-cow model of elite law firms—first-year associates racking up billable hours from endless hours of M&A contract document review, with the revenue flowing up the pyramid to partners—is facing an unprecedented challenge.”<sup>276</sup> These pronouncements of doom

<sup>273</sup> Natasha Bernal, *Special Report: Legal Technology—Rise of the Machines*, THELAWYER.COM (Dec. 18, 2015 12:00 AM), <http://www.thelawyer.com/issues/7-december-2015/special-report-legal-technology-rise-of-the-machines/> [<http://perma.cc/J4UE-KVED>] (interviewing Bruce Braude, Head of Strategic Client Technology, Berwin Leighton Paisner).

<sup>274</sup> See, e.g., *Latham & Watkins Picks Kira Systems For Legal AI Review Work*, ARTIFICIAL LAW (Nov. 28, 2017), <http://www.artificiallawyer.com/2017/11/28/latham-watkins-picks-kira-systems-for-legal-ai-review-work/> [<http://perma.cc/SHV5-35ZC>]; *Legal AI Company Kira Wins UK Law Firm Addleshaw Goddard as New Client*, ARTIFICIAL LAW (Dec. 13, 2016), <http://www.artificiallawyer.com/2016/12/13/legal-ai-company-kira-wins-uk-law-firm-addleshaw-goddard-as-new-client-2/> [<http://perma.cc/32VU-XZM2>] (mentioning additional purchases by McCann Fitzgerald, Fenwick and Freshfields); *White Shoe Firm Davis Polk Picks Kira In AI Market Milestone*, ARTIFICIAL LAW (Nov. 29, 2017), <http://www.artificiallawyer.com/2017/11/29/white-shoe-firm-davis-polk-picks-kira-in-ai-market-milestone/> [<http://perma.cc/FH89-NTC7>]; Ricci Dipshan, *Clifford Chance Partners with Kira Systems, Using AI to Expand Review, Cost-Saving Capabilities*, LEGALTECH NEWS (July 5, 2016, 2:48 PM), <http://www.law.com/legaltechnews/almID/1202761747017/Clifford-Chance-Partners-with-Kira-Systems-Using-AI-to-Expand-Review-CostSaving-Capabilities/> [<http://perma.cc/EF8L-UX5W>]; Debra Weiss, *DLA Piper To Use Artificial Intelligence for M&A Document Review*, ABA J. (June 15, 2016, 1:30 PM), [http://www.abajournal.com/news/article/dla\\_piper\\_to\\_use\\_artificial\\_intelligence\\_technology\\_for\\_ma\\_document\\_review](http://www.abajournal.com/news/article/dla_piper_to_use_artificial_intelligence_technology_for_ma_document_review) [<http://perma.cc/TZ5P-NEUU>].

<sup>275</sup> Eric Rosenbaum, *Can Elite Law Firms Survive the Rise of Artificial Intelligence? The Jury is Still Out*, CNBC (Nov. 17, 2016, 2:31 PM), <http://www.cnbc.com/2016/11/17/can-cash-cow-of-elite-legal-firms-survive-ai-the-jury-is-still-out.html> [<http://perma.cc/M67D-E5RD>].

<sup>276</sup> *Id.*

should not be surprising, given that the tasks involved in due diligence work and e-discovery are not particularly high-level:

The legal team goes through the contracts and pulls out the types of clauses most likely to cause trouble . . . . But the goal, at first, is not to analyze these clauses. It's just to find them. Historically, high-billing associates did this work—yet another thing clients will no longer tolerate. Though the work is time-consuming, it doesn't take any deep legal thought.<sup>277</sup>

Professor Barton best sums up the decline of such routine work for lawyers using an anecdote from his Big Law associate days:

Anyone who worked in Big Law in the 1990s or early 2000s has a story of a massive litigation or due diligence project gone mad: rotating team of young associates poring over hundreds of boxes of documents in a warehouse, all the while billing their time to befuddled corporate clients. Even at the time it seemed like a crazy and horrible misuse of human capital, let alone a massive waste of money for clients. When something cannot go on forever, it won't, and these sorts of tasks are not coming back to Big Law any time soon.<sup>278</sup>

Or, as Ron Dolin, a research fellow at Harvard Law School and legal-innovation expert said, “At some point, document review and due diligence won't be about dozens of humans looking at millions of documents . . . . It'll be about getting a handful of people to run the software.”<sup>279</sup> And it will be about those lawyers who are able to work with engineers to get these systems right.

Back then, the only open question was when the “waste of money for clients” would come to an end. The answer has become apparent: the day is now, as clients have made it crystal clear that they no longer wish to pay for that work. In a 2011 *Wall Street Journal* and Association of Corporate Counsel survey of 366 major corporate legal departments, more than 20% refused to pay for the work of first or second-year attorneys in at least some matters.<sup>280</sup> Almost half of the companies said that they put

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<sup>277</sup> Fish, *supra* note 258.

<sup>278</sup> BARTON, *supra* note 159, at 73.

<sup>279</sup> Fish, *supra* note 258.

<sup>280</sup> Joe Palazzolo, *First-Year Associates: Are They Worth It?*, WALL STREET J. (Oct.

those policies in place during the past two years.<sup>281</sup> As noted by the survey's authors, this trend appears to be growing.<sup>282</sup> To put it more bluntly—and perhaps even cruelly—the Associate General Counsel of a company ranked 39 on the Fortune 500 stated that their company refuses to allow first or second year associates to staff their matters because they “are worthless.”<sup>283</sup>

As such, law firms are increasingly unable to recoup the cost of younger lawyers. This has been an apocryphal story for years, but now it has been proven. According to statistics from actual law-firm billings, the hours billed by first-year associates are down 60% in just five years.<sup>284</sup> Unsurprisingly, hiring has also been down. While hiring levels rebounded somewhat in 2015 from prior years, they still have yet to reach pre-2008 recession levels.<sup>285</sup> Surveys of large law firms have found that nearly two-thirds of firm leaders expect the drop in first-year hiring and in overall leverage to be permanent.<sup>286</sup>

Behind the numbers, many private law firm leaders believe that we are on our way to a future where at least the younger lawyers will be replaced by robots. A 2015 Altman Weil survey of 320 managing partners of U.S. law firms asked, “Can you envision a law-focused ‘Watson’ replacing any of the following timekeepers in your firm in the next 5 to 10 years?”<sup>287</sup> The results were surprising, as a substantial number, 35% (up from 23% four years prior) were resigned to the replacement of lower-level lawyers.<sup>288</sup> Only 20% (versus nearly half previously) of the managing partners thought that AI would never replace humans.<sup>289</sup> Another survey suggested that legal-technology solutions could perform “as much as thirty to fifty percent of tasks carried out by junior lawyers today.”<sup>290</sup>

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17, 2011, 9:59 AM), <http://blogs.wsj.com/law/2011/10/17/first-year-associates-are-they-worth-it/> [<http://perma.cc/6NFW-9T4C>].

<sup>281</sup> *Id.*

<sup>282</sup> *Id.*

<sup>283</sup> BARTON, *supra* note 159, at 71.

<sup>284</sup> See Elizabeth Olson, *Corporations Drive Drop in Law Firms' Use of Starting Lawyers, Study Finds*, N.Y. TIMES (Oct. 10, 2014, 12:25 PM), <http://dealbook.nytimes.com/2014/10/10/corporations-drive-drop-in-law-firms-use-of-starting-lawyers-study-finds/> [<http://perma.cc/XEY3-D4BJ>].

<sup>285</sup> See Sarah Randazzo, *Law School Graduates Finding Fewer Private Practice Jobs*, WALL STREET J. (Aug. 17, 2016), <http://blogs.wsj.com/law/2016/08/17/private-sector-jobs-for-law-grads-hit-historic-lows/> [<http://perma.cc/2FLV-SGBS>].

<sup>286</sup> See Clay & Seeger, *supra* note 181, at 56.

<sup>287</sup> Thomas S. Clay & Eric A. Seeger, *2015 Law Firms in Transition*, ALTMAN WEIL 82, 83 (Apr. 2015), [http://www.altmanweil.com/dir\\_docs/resource/1c789ef2-5cff-463a-863a-2248d23882a7\\_document.pdf](http://www.altmanweil.com/dir_docs/resource/1c789ef2-5cff-463a-863a-2248d23882a7_document.pdf) [<http://perma.cc/24MM-E3MT>].

<sup>288</sup> See *id.*

<sup>289</sup> See *id.*

<sup>290</sup> Christian Veith et al., *How Legal Technology Will Change the Practice of Law* 3, BUCERIUS L. SCH. (Jan. 2016),

What *Lola* foretells is that the future for those performing low-level legal tasks is likely to be short-lived. As the advancement of AI brings greater efficiency to the legal profession—and greater rewards to those at the top—those performing those low-level tasks are, simply put, costs to be eliminated. These lawyers, once secure (even if bored and frustrated) in their positions, now fear replacement by robots, to the point that it has become fodder for parody in mainstream TV comedy shows. On a recent episode of *The Daily Show*, a young lawyer played by comedian (and law school graduate) Ronny Chieng half-jokingly threatens in a satirical skit to sue the robots that stole his job.<sup>291</sup> In the skit, Chieng’s case against legal robots goes to trial, but the jurors are robots and the judge is Amazon’s Alexa. Chieng’s opening statement reflects the struggles that attorneys may soon meet:

Your honor, members of the jury, this is about the essence of humanity itself, because unlike that thing [pointing to the legal robot] I went to law school—taught by humans. I spent countless, sleepless, nights, reading, writing, pondering [things] . . . , all things artificial intelligence can’t do, and quite frankly I’m sensing a lot of bias in this court room.<sup>292</sup>

In a pun based on the movie “A Few Good Men,” the trial ends with Judge Alexa asking Chieng if he wants answers. When Chieng replies that he wants the data, Judge Alexa responds, “You can’t handle the data.” Perhaps, as they say, it’s funny because it’s true. Maybe no lawyer, no matter his or her level, *can* handle the data.

The rise of the machines might only seem like a problem for those who, like David Lola, find themselves at the bottom of the law firm pyramid. In reality, the fundamental economic models of the profession are now at risk. Law firms have traditionally used a pyramid model, with partners at the smallest top layer and associates at the bottom. Contract lawyers sit farther below.<sup>293</sup> James W. Jones, a Senior Fellow at the Center for the

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education.de/fileadmin/content/pdf/studies\_publications/Legal\_Tech\_Report\_2016.pdf [http://perma.cc/6XCG-JVBK].

<sup>291</sup> Ronny Chieng, *Disrupting the Legal System with Robots*, DAILY SHOW (Mar. 7, 2018), <http://www.cc.com/video-clips/b27lei/the-daily-show-with-trevor-noah-disrupting-the-legal-system-with-robots> [http://perma.cc/2L9S-NAM7].

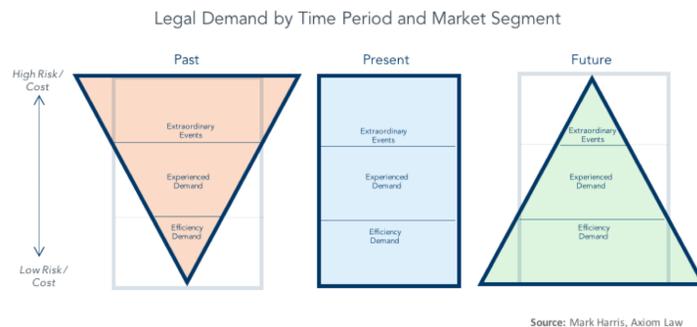
<sup>292</sup> *Id.*

<sup>293</sup> Michael Goldhaber, *Millennial Contract Lawyers: The Screwed Generation?*, AM. LAW. (Feb. 2016), <http://www.law.com/americanlawyer/almID/1202749827031/Millennial-Contract-Lawyers-The-Screwed-Generation/> [http://perma.cc/4TFQ-U4YD].

Study of the Legal Profession at Georgetown University Law Center, says that “[w]hen law firms bring in staffs of contract lawyers instead of bringing in permanent attorneys, they are choosing a lower cost alternative and will continue to make every effort to keep costs low . . . . That’s just reality, I’m afraid.”<sup>294</sup> As a result, many tasks previously performed by lawyers are now handled by technology, non-lawyers, or a combination of both.

As Dolin puts it more succinctly: “The first-year associate as cash cow to partnership is breaking . . . . [I]f you have a pyramid model, that’s in trouble.”<sup>295</sup>

Meanwhile, alternative legal services providers, the nemesis of the old law firms, fully recognize and are ready to pounce upon the opportunity to disintermediate not just the law firms, but corporate legal teams as well. Professor Henderson, perhaps the most diligent of those studying what he terms “NewLaw,” foresees a future where the vast majority of legal work has migrated from the high-risk/high-cost work of “extraordinary events” and “experienced demand” to low-risk/low-cost commoditized “efficiency” work.<sup>296</sup> This migration, illustrated below in a chart that Professor Henderson copied from presentations by the founder of Axiom, the largest of the NewLaw companies, shows that the old law firm pyramid model of leverage is failing just as a new pyramid model of work is rising.<sup>297</sup>



Professor Henderson describes the strain that law firms will experience in developing better efficiencies as “a difficult slough

<sup>294</sup> Anna Stolley Persky, *Under Contract*, WASH. LAW. (Jan. 2014), <http://www.dcbbar.org/bar-resources/publications/washington-lawyer/articles/january-2014-contract-lawyers.cfm> [http://perma.cc/S4JE-ZS2Y].

<sup>295</sup> Rosenbaum, *supra* note 275.

<sup>296</sup> William Henderson, *World Class Innovation and Efficiency, Billed by the Hour*, LEGAL EVOLUTION (June 18, 2017), <http://www.legalevolution.org/2017/06/world-class-innovation-efficiency-billed-hour-010/> [http://perma.cc/NV9A-8Y7F].

<sup>297</sup> *Id.* (reproducing chart from a 2013 presentation by Mark Harris of Axiom).

for law firm leaders because the required investments don't produce higher profits this year or next. Instead, the payoff is long-term relevance and survival."<sup>298</sup> Having already discussed the organizational and personality factors that hold back lawyers from being willing to make such investments, we share Professor Henderson's apprehensions.

The exponential rise of technology will create another, even more insidious type of disruption. We have already seen how predictions of relative safety for certain legal tasks (such as fact investigation and legal writing) by accomplished experts such as Remus and Levy are already proving wrong because the exponential rate of change is simply too fast. Additionally, we have noted how traditional legal tasks could be considered not to be the practice of law if machines are doing them, as in *Lola*. Thus, the lawyers who are the initial "winners" in this process, as they are able to accomplish—and bill—more, will inevitably wind up as the losers when the technological disruption commoditizes their work. Many, if not most, lawyers will not even recognize the danger in time because of what Richard and Daniel Susskind call "technological myopia," their term for "the tendency to underestimate the potential of tomorrow's applications by evaluating them in terms of today's enabling technologies."<sup>299</sup> This myopia, combined with what the Susskinds call "irrational rejectionism," as in "the dogmatic dismissal of a system with which the skeptic has no direct personal experience," will continue to make lawyers and law firms slow to react when history does change and disruption does finally begin.<sup>300</sup>

As one leading partner at a Silicon Valley Big Law firm, who now bills over \$1,000 an hour, said, "[f]or the time being, experience like mine is something people are willing to pay for . . . What clients don't want to pay for is any routine work."<sup>301</sup> But, the partner then added, "the trouble is that technology makes more and more work routine."<sup>302</sup>

*Lola* demonstrates that the profession will not act to stop this process of bottom-up displacement. Instead, *Lola* helps to pave the way up the layers of lawyers within the hierarchical pyramid because, as soon as technology becomes able to perform a new task, that task is removed from what should be considered as the practice of law. The inescapable result can only be a creeping

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<sup>298</sup> *Id.*

<sup>299</sup> RICHARD SUSSKIND & DANIEL SUSSKIND, *THE FUTURE OF THE PROFESSIONS* 44 (2016).

<sup>300</sup> *Id.*

<sup>301</sup> Steve Lohr, *AI is Doing Legal Work*, N.Y. TIMES (Mar. 19, 2017), <http://www.nytimes.com/2017/03/19/technology/lawyers-artificial-intelligence.html> [<http://perma.cc/U3EK-93JP>].

<sup>302</sup> *Id.*

doom of disintermediation from the bottom to the top of the profession. What, then, can we do?

## V. VISIONS FOR THE FUTURE: SHALL WE WELCOME OUR NEW COMPUTER OVERLORDS, OR SUE THEM?

### A. *A Plan for the Future*

The coming battle to save the legal profession from this bottom-up disaster will not be easy. Exponential change grants little time to react before it is too late. Worse, such rapid change renders the past of limited use as a guide for the present or the future, and we have already discussed lawyers' difficulties when dealing with the new. Staving off doom will require a conversational shift within the legal community, away from both the utopian fantasy that AI will improve the profession for everyone, as well as the alarmist suggestions that AI will completely replace humans. Instead, more realistic explorations of how lawyers can and should use AI to augment their efficacy and skillsets are needed.

Perhaps the best guide for the survival of human workers in this new world may be derived from one of the few works that provides a positive spin on the future of AI and the workforce, *Only Humans Need Apply* by Thomas Davenport and Julia Kirby, both of whom are established experts and extensive writers on the impact of analytics upon work.<sup>303</sup> Davenport and Kirby have proposed seven roles in which humans can provide needed value in working with machines:

1. **“Design and create the machine’s thinking”** since “it would currently—and for the foreseeable future—be very difficult to create such systems without a substantial amount of human labor and guidance”;<sup>304</sup>
2. **“Provide ‘big-picture’ perspective”** as computers are not good at “big picture,” unstructured thinking issues such as comparing multiple solutions to the same problem, whether new information sources are needed or even just whether something “makes sense” or not;<sup>305</sup>
3. **“Integrate and synthesize across multiple systems and results”** that are still isolated and

<sup>303</sup> See *About Tom Davenport*, TOM DAVENPORT (2016), <http://www.tomdavenport.com/about/> [<http://perma.cc/A5X8-VG9L>]; Julia Kirby, LINKEDIN (Feb. 2016), <http://www.linkedin.com/in/julia-kirby-34515a5/> [<http://perma.cc/62SQ-ST5V>].

<sup>304</sup> DAVENPORT & KIRBY, *supra* note 81, at 71.

<sup>305</sup> *Id.*

- siloed, as humans are better at integrating information and triangulating correct answers;<sup>306</sup>
4. **Test and monitor** systems to make sure the results that are correct, as “[i]t is the role of humans to observe that systems no longer provide high-quality answers and need to be updated or replaced”,<sup>307</sup>
  5. **Know how to best apply the system**, or, as the authors put it, “know the machine’s weaknesses and strengths,” to make sure that such systems are applied appropriately;<sup>308</sup>
  6. **Elicit the necessary information** to avoid the condition commonly known as “Garbage In, Garbage Out” (or “GIGO”), wherein flawed data produces flawed answers,<sup>309</sup> by determining and obtaining the appropriate information, often through questioning and information gathering from our fellow humans;<sup>310</sup> and
  7. **Persuade humans to take action on automated recommendations** because, no matter how smart our machines become and no matter how good the advice they provide, it is ultimately humans who have to take—or not take—the actual actions that follow.<sup>311</sup>

These seven roles are some of the best-defined proposals for human career survival in the coming age of AI. While these roles do not always track neatly within the legal profession, we believe that they match three critical demands for lawyers, law firms, and the legal profession: innovation, accountability, and judgment. The first three roles (1. Design and create, 2. See the big picture, and 3. Integrate and synthesize) all describe a new and critical need to innovate within the law. The next three roles (4. Test and monitor, 5. Apply the system, and 6. Elicit the necessary information) can be best examined from the need for an “engaged lawyer” to ensure accountability, including the accountability of technological systems, within the law. The final, and perhaps most important role (7. Persuade and advise), goes directly to lawyers’ greatest traditional value: using

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<sup>306</sup> *Id.* at 71-72.

<sup>307</sup> *Id.* at 72.

<sup>308</sup> *Id.*

<sup>309</sup> Margaret Rouse, *Garbage In, Garbage Out (GIGO)*, SEARCHSOFTWAREQUALITY (Mar. 2008), <http://searchsoftwarequality.techtarget.com/definition/garbage-in-garbage-out> [<http://perma.cc/X6BT-ZYTY>].

<sup>310</sup> See DAVENPORT & KIRBY, *supra* note 81, at 72-73.

<sup>311</sup> *Id.* at 73.

judgment and wisdom to represent the best interests of their clients.

### *B. Lawyers as Innovators*

In the face of ever-advancing AI capabilities, lawyers, law firms, corporate legal departments, and law schools must all be willing to abandon that “best and most basic answer” of “we’ve always done it that way.”<sup>312</sup> The legal profession must instead focus on the future and how it can promote the behavior needed to succeed. For this reason, the following discussion begins with the first three of Davenport and Kirby’s roles, which may all be summed up by that one word: “innovation.”

In a certain sense, lawyers are rightly famous for innovation, in the sense of strategic analysis and solutions to client problems. They have, however, have been in an all-too-comfortable position in society for a long time. Now things are changing and lawyers face a stark choice: be changed or be the change. Lawyers must innovate now to best represent—and protect—their own interests.

Innovation can, of course, include designing and creating new systems, or merely being very good at understanding and using the expanding universe of existing, but still siloed, analytical products to provide clients with models and results that can clarify the big picture. This is perhaps one area where younger lawyers have a competitive advantage. The lawyer who can wield a variety of tools to more efficiently analyze trends and other important factors, rather than just performing word searches on subscription databases, will be the one who clients hire. Indeed, the innovative lawyers will be the first to recognize and harness AI applications, perhaps even those that were never intended for their profession. These innovators will recognize that AI need not trigger the end of the legal profession, but can instead provide entirely new opportunities both for individual success and for improvement of the profession.

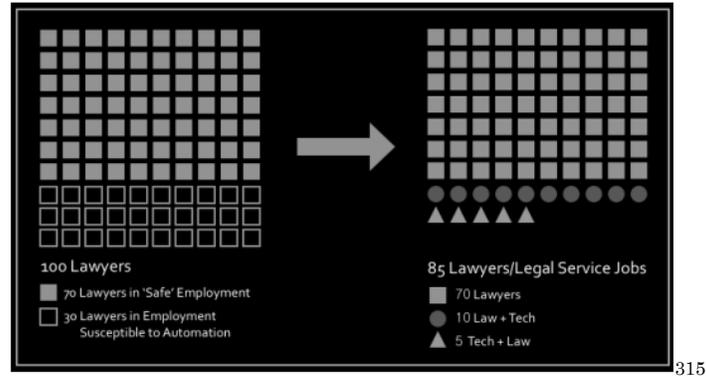
Accordingly, instead of wondering *why* innovate, lawyers should wonder *why not*, particularly when a generational opportunity exists for true disruption. If the law is a client-service industry, why not strive for the next level of service? And if so many other industries can successfully adopt AI, why not lawyers?

Professor Dan Katz, who has written extensively on this subject, has at times termed our future “Law + Tech,” as he envisions many lawyers migrating into jobs combining legal and technology skills.<sup>313</sup> Professor Katz has created a chart for this

<sup>312</sup> See BARTON, *supra* note 159, at 175.

<sup>313</sup> Daniel M. Katz, *Quantitative Legal Prediction—Or—How I Learned to Stop*

hypothetical transformation that shows how a posited 10% of lawyers—the circles in the chart—could become “Law + Tech” hybrids in the not-so-distant future by introducing technology skills and experience into the practice of law.<sup>314</sup>



Katz’s chart also shows how a hypothetical 5% of these future lawyers—the triangles—could move into technology-focused jobs while still using their legal knowledge as “Tech + Law” hybrids.<sup>316</sup> Yet, we should also be clear about an implication of Katz’s chart that is easily missed: the black empty spaces at the bottom of the right-hand side that represent a hypothetical 15% of lawyers. Perhaps those blank spaces should be described in the same format as the others: “Law + Unemployment.”

Still, the development of these law/tech hybrid roles will provide a way forward for many. Those who can put in the time and hard work to move forward by discarding past-oriented thinking and attitudes have a good chance of success. Daniel M. Mills, assistant director of the D.C. Bar Practice Management Advisory Service, has suggested that “[t]he time has come for attorneys . . . to think creatively about how to become integral to the new legal market.”<sup>317</sup>

Perhaps there is something to learn from our technology-driven enterprises. Just a few years ago, Gopi Kallayil, Google’s Chief Social Evangelist, revealed his company’s “nine core principles for innovation” at a Silicon Valley event, which

*Worrying and Start Preparing for the Data-Driven Future of the Legal Services Industry*, 62 EMORY L.J. 909, 965 (2013).

<sup>314</sup> *Id.*

<sup>315</sup> *Id.*

<sup>316</sup> *Id.*

<sup>317</sup> Anna Stolley Persky, *Under Contract: Temporary Attorneys Encounter No-Frills Assignments, Workspaces*, WASH. LAW. (Jan. 2014), <http://www.dcb.org/bar-resources/publications/washington-lawyer/articles/january-2014-contract-lawyers.cfm> [http://perma.cc/G6SG-URES].

naturally went viral.<sup>318</sup> Unfortunately, however, many of Google's rules for innovation seem like the exact opposite of what one would expect from the modern lawyer.

Google's first rule, "Innovation comes from anywhere," clashes with the hierarchical nature of law school and firms. Getting law school or law firm leadership to listen to the ideas of the lawyers (or lawyers-to-be) below them and even to "non-lawyers" could seem like a stretch. Fortunately, a few law firm leaders are now pushing back against these structures and including younger attorneys and "non-lawyers" in the development of legal technology, even pushing back on the term "non-lawyer" as destructive to the kind of environment necessary to respect the contributions of those without law degrees.<sup>319</sup>

Consider as well how the fundamental points of Google's fifth rule ("Ship your products often and early, and do not wait for perfection") and eighth rule ("There should be no stigma attached to failure") go against the innate psychological nature of most lawyers. As we discussed above, the research shows that most attorneys are perfectionists who fear failure, go to great lengths to avoid failure, find it difficult to recover when they do fail, and punish others for failure.<sup>320</sup> Indeed, some might wonder if practitioners, particularly the most successful ones, tend to serve more as examples of organizations that live by what one pundit dubbed "The Nine Rules for Stifling Innovation."<sup>321</sup>

Our discussion now turns to law firms, as they are in the best position to leverage talent and warehouse knowledge. For example, while law firms might not seem like the best places to go looking for Big Data—as even the biggest data stores of the largest law firms are tiny in comparison to the massive volumes held by the typical consumer-oriented corporation—what law firms lack in data volume, they make up for in data value. The high-value and business-critical information that law firms hold may be exactly what innovative firms need to empower AI driven decision-making. Although law firms may not maintain large swaths of data, they certainly maintain the data that matters for the outcome of a case or a transaction. Hackers understand

<sup>318</sup> Kathy Chin Leong, *Google Reveals Its 9 Principles of Innovation*, FAST CO. (Nov. 20, 2013), <http://www.fastcompany.com/3021956/googles-nine-principles-of-innovation> [<http://perma.cc/X4BK-92SJ>].

<sup>319</sup> See, e.g., Ralph Baxter, *Stop Calling Legal Service Professionals "Non-Lawyers"*, LEGAL EXECUTIVE INST., (May 19, 2015), <http://legalexecutiveinstitute.com/stop-calling-legal-service-professionals-non-lawyers/> [<http://perma.cc/GZ2H-C9AW>].

<sup>320</sup> See Richard, *supra* note 197.

<sup>321</sup> Rosabeth Moss Kanter, *Nine Rules for Stifling Innovation*, HARV. BUS. REV. (Jan. 15, 2013), <http://hbr.org/2013/01/nine-rules-for-stifling-innova> [<http://perma.cc/2Z8X-BDEV>].

the value of this law-firm data, which is why law firms have been one of their primary targets.<sup>322</sup> Law firm data—and not just past memoranda and pleadings, but arguably including the clicks and keystrokes associates make when performing legal research—likely have untold and untapped value. Law firms of the future will need to zealously guard the rights to, and learn how to derive greater benefit from, their own data.

The bottom line is that, to survive, law firms will need to create genuine value from the wealth of information they possess, and not simply by blasting out mostly ignored client alerts after every new case and regulatory development.<sup>323</sup> As such, law firms need to capture their lawyers' knowledge to provide client value. This can be done by incorporating lawyers' knowledge into systems or by collaborating with software companies.<sup>324</sup> Indeed, legal departments have begun, and must continue, to make use of newly available technology to incorporate their legal knowledge into automated systems.<sup>325</sup>

Many firms have already recognized the need to adapt and have responded by creating innovation centers or other similar initiatives. The Altman Weil 2017 law firm survey found that “[h]alf of survey respondents reported that their firms are actively engaged in creating special projects and experiments to test innovative ideas or methods,” a finding that Altman Weil found “heartening.”<sup>326</sup> But, given the speed of innovation in technology, these numbers need to increase as much as possible

<sup>322</sup> Dan Steiner, *Hackers Are Aggressively Targeting Law Firms' Data*, CIO (Aug. 3, 2017), <http://www.cio.com/article/3212829/cyber-attacks-espionage/hackers-are-aggressively-targeting-law-firms-data.html> [<http://perma.cc/BY9C-EY6U>].

<sup>323</sup> See, e.g., Brian Dalton, *13 Things That Keep GCs Up At Night*, ABOVE THE LAW (Oct. 28, 2014) <http://abovethelaw.com/2014/10/13-things-keeping-general-counsel-up-at-night/?rf=1> [<http://perma.cc/AWM5-KS6A>] (quoting one GC as saying “These [memos and alerts] do not serve a particularly useful function as they are not tailored to the particular company and are not detailed enough to be relevant” and another as saying “I have a file for those things and it’s round”); Katherine Magnuson, *5 Things GCs Want from Outside Counsel*, BIG L. BUS. (Mar. 30, 2015), <http://biglawbusiness.com/5-things-gcs-want-from-outside-counsel/> [<http://perma.cc/3J2K-3UZT>] (quoting one in-house legal officer as saying “I delete almost every law firm alert that comes into my email these days”).

<sup>324</sup> Victor Li, *From C-Suite to Legal Service Founder, Michael Mills Has Always Been a Leader*, ABA J. (Aug. 16, 2017), [http://www.abajournal.com/legalrebels/article/rebels\\_podcast\\_episode\\_019](http://www.abajournal.com/legalrebels/article/rebels_podcast_episode_019) [<http://perma.cc/5HSV-GBU7>].

<sup>325</sup> For example, the legal department of publisher Hearst Corporation has been working to train and code a machine-learning tool named Charlotte, with the plan that it will first be able to create non-disclosure agreements and eventually take on complex litigation and M&A deals. See Yasmin Lambert, *Legal Teams Are Paying Their Way*, FIN. TIMES (Dec. 5, 2016), <http://www.ft.com/content/8ce9a590-b23b-11e6-9c37-5787335499a0> [<http://perma.cc/K2Q7-S583>].

<sup>326</sup> Clay & Seeger, *supra* note 172, at vi.

to keep up with the times. Firms need to focus on the design process when determining what kind of programs to implement. A design process in the legal context includes:

[S]imply bringing a team of lawyers together with an experienced design professional to consider a specific legal service issue, taking into account all the relevant objectives, resources and constraints . . . to examine the following issue . . . [h]ow can we serve our clients at the lower fees they are demanding, while maintaining quality and competitive profitability?<sup>327</sup>

Firms should engage with their different practice groups and attorney levels, along with their technical, operational, and administrative staff, in order to understand which tasks could be accomplished through automation. It may very well be the new-millennium lawyers and staff, those digital-technology natives and multi-taskers, who will more quickly identify such tasks and most eagerly adopt time-saving and cost-efficient technologies.

Some law firms, largely at the top of the market, have already begun to capture the knowledge created by their lawyers in order to provide greater client value. The creators of the IBM Watson-based ROSS have partnered with BakerHostetler to develop a system to assist with bankruptcy cases.<sup>328</sup> Freshfields and Clifford Chance have partnered with technology companies like Neota Logic to create expert systems that incorporate lawyers' knowledge.<sup>329</sup> Some of these collaborations have gone even farther; Neota worked with Littler Mendelson to set up ComplianceHR, which sells employment-law software and services on a subscription basis to human resource professionals in, as of last year, more than one hundred major employers.<sup>330</sup>

One firm, Seyfarth Shaw has gone even farther to reinvent how the firm works around a form of legal project management, using a methodology known as "lean."<sup>331</sup> Seyfarth has fully

<sup>327</sup> Ralph Baxter, *Embracing Design: Accelerating Progress in Legal Technology*, LEGAL EXECUTIVE INST. (June 30, 2015), <http://legalexecutiveinstitute.com/embracing-design-accelerating-progress-in-legal-technology/> [http://perma.cc/X9DZ-7PRU].

<sup>328</sup> See Karen Turner, *Meet 'Ross' The Newly Hired Legal Robot*, WASH. POST (May 16, 2016), <http://www.washingtonpost.com/news/innovations/wp/2016/05/16/meet-ross-the-newly-hired-legal-robot/> [http://perma.cc/877G-EUE8].

<sup>329</sup> *Freshfields Announces Global Collaboration with Neota*, LEGAL IT INSIDER (Jan. 31, 2017), <http://www.legaltechnology.com/latest-news/freshfields-announces-global-collaboration-with-neota/> [http://perma.cc/877G-EUE8].

<sup>330</sup> Li, *supra* note 324.

<sup>331</sup> *A New Order for Law*, MCKINSEY & CO. (Aug. 2015),

committed to handling all legal matters through systematized workflows, whether clients request it or not.<sup>332</sup> To maintain accountability to clients through those workflows, Seyfarth makes the entire process transparent.<sup>333</sup>

Even small firms are starting to get in on the innovation game. For example, Valorem Law Group, a small Chicago firm that bills itself as “BigLaw refugees,”<sup>334</sup> lured Jeff Carr, the well-known outspoken former general counsel of FMC, to start a group called ValoremNext that focuses on the revolutionary idea of “preventative law,” to identify and prevent legal issues before they need to be fixed through litigation.<sup>335</sup> The eighteen-lawyer firm Horty Springer announced at the beginning of the year that it would resell contract analytics software from LegalSifter to its healthcare industry, to help lawyers sort through the business associate agreements required by HIPAA.<sup>336</sup>

Still, there is a continually developing need for other firms and attorneys to start doing the same—and in their own, unique ways based on their particular practices. Indeed, the possibilities for merging technology and law are endless: cutting office costs by working remotely, creating technology-specific practices that showcase AI cognizance, using AI to collect swaths of industry knowledge and distill the information for clients, or even starting slow with simple blogs and client alerts about upcoming legal changes.

In this regard, one may argue that BigLaw has the greater advantage. These national or multinational firms are positioned to innovate, as they: (1) may conduct a detailed design process that draws from an expansive wealth of knowledge from their varied practice groups and the sheer number of attorneys they employ; (2) typically have the funds to invest into research and development; (3) may test solutions more easily given their numerous offices; and (4) tend to employ larger numbers of digital natives. Smaller firms and individual practitioners should not be overlooked, however, as they have the flexibility to quickly adopt new technologies. More recently, smaller firms

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<http://www.mckinsey.com/business-functions/operations/our-insights/a-new-order-for-law> [<http://perma.cc/WS2F-5SBD>].

<sup>332</sup> *See id.*

<sup>333</sup> *Id.*

<sup>334</sup> *Don't Litigate by Fear*, VALOREM L. GROUP, <http://www.valoremlaw.com/dont-litigate-by-fear> [<http://perma.cc/DMB2-M3SF>].

<sup>335</sup> *See* Victor Li, *Jeff Carr Ends his Retirement to Join Valorem Law Group*, ABA J. (Sept. 8, 2015), [http://www.abajournal.com/lawscribbler/article/jeff\\_carr\\_ends\\_his\\_retirement\\_to\\_join\\_valorem\\_law\\_group](http://www.abajournal.com/lawscribbler/article/jeff_carr_ends_his_retirement_to_join_valorem_law_group) [<http://perma.cc/9JMP-SKXL>].

<sup>336</sup> *See* Patty Tascarella, *Pittsburgh AI Startup Partnering with Local Law Firm*, PITTSBURGH BUS. TIMES (Jan. 9, 2018), <http://www.bizjournals.com/pittsburgh/news/2018/01/09/pittsburgh-ai-startup-local-law-firm-partner.html> [<http://perma.cc/6MWN-YB67>].

have been at the forefront of leveraging mobile technology and using it to their advantage, cutting down on office space costs and providing their attorneys with greater flexibility.<sup>337</sup>

In an increasingly competitive legal market, experts are warning firms that they must get ahead of their competition, as “[a] firm can never get ahead by merely aspiring to keep pace with sluggish competitors.”<sup>338</sup> Hogan Lovells CEO Stephen Immelt was quoted as saying, “Nobody would put law firms in the hall of fame of perfectly managed organizations . . . but more firms are now trying to think differently about how they engage with clients.”<sup>339</sup> He continued by noting that “[i]n a much more discerning world, the firms that will be successful will be the ones that can offer clients something they are not going to find at 10 other law firms doing essentially the same thing.”<sup>340</sup> Similarly, others have noted that the strategy of “simply . . . keep[ing] up with the pack . . . misses the point that most of the pack is itself lagging.”<sup>341</sup>

Although “innovative and entrepreneurial firms” have been leading the way, other firms are already being “nudged or dragged, by their clients, into 21st century legal practice.”<sup>342</sup> Now the clients, not the firms, often call the shots on technology. When general counsels of major corporations were asked recently “how serious . . . law firms [are] about changing their legal service delivery model to provide greater value to clients (as opposed to simply cutting costs),” the average score given was a 3.2 out of 10 (with 0 as “[n]ot all that serious” and 10 as “[d]oing everything they can”).<sup>343</sup> Thus, to the clients, brilliance alone

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<sup>337</sup> For example, Rimon Law, FisherBroyles, and The Potomac Law Group have all become “virtual firms” by dumping most of their expensive office space and instead leveraging mobile technology and social networking “water coolers” to work from anywhere. *See* Zach Abramowitz, *Will All Law Firms Eventually Go Virtual? Live Conversation with Rimon P.C. Founder Michael Moradzadeh*, ABOVE THE LAW (July 18, 2017), <http://abovethelaw.com/2017/07/will-all-law-firms-eventually-go-virtual-live-conversation-with-rimon-p-c-founder-michael-moradzadeh/> [<http://perma.cc/S9UX-2SPL>].

<sup>338</sup> Clay & Seeger, *supra* note 181, at vii.

<sup>339</sup> Chris Johnson, *Outside the Box: Firms Go Beyond the Law with New Ventures*, AM. LAW. (Apr. 7, 2016), [http://www.americanlawyer-digital.com/americanlawyer-ipauth/201604ip?article\\_id=1230985](http://www.americanlawyer-digital.com/americanlawyer-ipauth/201604ip?article_id=1230985) [<http://perma.cc/4XG4-SVVQ>].

<sup>340</sup> *Id.*

<sup>341</sup> Clay & Seeger, *supra* note 181, at vii.

<sup>342</sup> Richard Susskind, *Legal Informatics—A Personal Appraisal of Context and Progress*, 1 EUR. J. L. & TECH. (2010), <http://ejlt.org/rt/printerFriendly/18/7> [<http://perma.cc/UM84-YPKN>].

<sup>343</sup> Rees Morrison & James Wilber, *2017 Chief Legal Officer Survey*, ALTMAN WEIL 39 (2017), [http://www.altmanweil.com/dir\\_docs/resource/BD1D63C3-3DD0-4FE4-BCAC-AD6F59CCC65A\\_document.pdf](http://www.altmanweil.com/dir_docs/resource/BD1D63C3-3DD0-4FE4-BCAC-AD6F59CCC65A_document.pdf) [<http://perma.cc/68SD-377D>]. Notably, when the survey began in 2010, the average score was 3.7; it has never risen above 3.8 since, and it has only dropped within the last few years.

will not cut it.<sup>344</sup> The brilliant *and* entrepreneurial attorney will get the worm.

Corporate counsel have also been hard at work creating their own change. The General Counsel of British Telecom recently reported in a LegalWeek survey that his team has innovated by deploying “primarily a combination of internally developed systems using SharePoint for document assembly, governance approvals and regulatory clearances, and third-party applications . . . .”<sup>345</sup> The Chief Legal and Compliance Officer of JDA Software similarly reported using SharePoint, along with Office 365 and Microsoft’s OneDrive Cloud system, to create to create a resource portal not just for the legal team but also to provide self-service to internal business clients.<sup>346</sup> The General Counsel of Telstra Australia also mentions in the survey how the company has created an automated self-service NDA tool.<sup>347</sup>

In the same vein, lawyers at Allstate Insurance recently unveiled their new “legal robot” Lia, touting that, “She doesn’t forget what she is told to do, doesn’t complain, and never asks for a raise.”<sup>348</sup> The goal for Lia is to handle high-frequency, low-risk inquiries from internal business units, such as reviewing disclaimer statements in advertising materials, which are, according to Lia’s creator, “scenarios that we thought the bot could handle.”<sup>349</sup> And, in what might be the most stunning form of innovation to date, last year JPMorgan Chase announced the creation of internal AI software that it calls “COIN,” short for “Contract Intelligence,” to review commercial loan agreements.<sup>350</sup> The COO of JPMorgan touted the new technology in the company’s letter to investors, crowing that COIN had extracted 150 relevant attributes from 12,000 annual commercial credit agreements in seconds, a process that would have taken human beings as many as 360,000 hours.<sup>351</sup> Even

<sup>344</sup> Persky, *supra* note 317.

<sup>345</sup> Bird & Bird, *AI: The New Wave of Legal Services GC Views on AI and Legal Tech*, LEGALWK. INTELLIGENCE 5 (Sept. 20, 2017), <http://www.executiveinsights.law.com/download/gcs-artificial-intelligence-client-view-wave-legal-tech-29370>.

<sup>346</sup> *Id.* at 6.

<sup>347</sup> *Id.* at 8.

<sup>348</sup> Miriam Rozen, *Legal Know-It-All Robot 'Lia' Joins Allstate's In-House Ranks*, AM. LAW. (Sept. 14, 2017, 4:52 PM), <http://www.law.com/americanlawyer/sites/americanlawyer/2017/09/14/legal-know-it-all-robot-lia-joins-allstates-in-house-ranks/> [http://perma.cc/D8U3-FNZV].

<sup>349</sup> *Id.*

<sup>350</sup> See Debra Weiss, *JPMorgan Chase Uses Tech to Save 360,000 Hours of Annual Work by Lawyers and Loan Officers*, ABA J. (Mar. 2, 2017), [http://www.abajournal.com/news/article/jpmorgan\\_chase\\_uses\\_tech\\_to\\_save\\_360000\\_hours\\_of\\_annual\\_work\\_by\\_lawyers\\_and](http://www.abajournal.com/news/article/jpmorgan_chase_uses_tech_to_save_360000_hours_of_annual_work_by_lawyers_and) [http://perma.cc/QSB5-QRKY].

<sup>351</sup> See Bryan Yurcan, *JPM's Zames Touts Automation, Robotics in Shareholder*

mainstream media soon recognized this new development as bad news for lawyers who would lose billable hours to COIN.<sup>352</sup>

Finally, law schools must be the first responders in dispelling lawyers of the notion that being smart is the sole prerequisite for success. The good news is that, while law schools have been slow to adapt,<sup>353</sup> change is underway. Professor Linna's Legal Services Innovation Index shows that law schools have begun to offer the types of education necessary for lawyers to understand and best use technology, with eighteen schools offering courses in basic technology, nineteen offering courses in applied technology, and even sixteen schools offering advanced courses in data analytics.<sup>354</sup>

While there are still many schools that provide only a few technology programs, or that do not even register on the Innovation Index because they provide no such offerings, a surprising number score strongly. Michigan State University, Suffolk Law School, Stanford, and Vermont Law lead the index with robust and diverse internal programs on technology. Other schools score impressively by focusing on partnerships with technology start-ups, such as Northwestern's Pritzker School of Law, which entered into an alliance with ROSS Intelligence "aimed at giving law school students hands-on experience with new technologies."<sup>355</sup> Some law schools are even offering courses in technology and innovation for practicing attorneys.<sup>356</sup>

While some lawyers, law firms, and law schools have made a great start, any overall movement away from traditional business and structural models remains "sluggish." In a survey of law firms conducted in late 2017 by the CTIA, "only 26 percent described themselves as early adopters, compared with 41 percent for accounting firms and 37 percent for marketing firms."<sup>357</sup> Historically, being risk-adverse was a successful self-

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*Letter*, AM. BANKER (Apr. 4, 2017, 5:16 PM), <http://www.americanbanker.com/news/jpms-zames-touts-automation-robotics-in-shareholder-letter> [<http://perma.cc/W9YC-PDR6>].

<sup>352</sup> See Dan Mangan, *Lawyers Could Be the Next Profession To Be Replaced by Computers*, CNBC (Feb. 17, 2017, 1:55 PM ET), <http://www.cnbc.com/2017/02/17/lawyers-could-be-replaced-by-artificial-intelligence.html> [<http://perma.cc/9UYB-BQZS>].

<sup>353</sup> See generally TAMANAHA, *supra* note 246; see also *Halfway Home*, INSIDE L. SCH. SCAM (Mar. 4, 2015), <http://insidethelawschoolscam.blogspot.com/> [<http://perma.cc/W9YC-PDR6>] (discussing law school technology reform).

<sup>354</sup> See Dan Linna, Jr., *Law School Innovation Index*, LAW SERVICES INNOVATION INDEX, <http://www.legaltechinnovation.com/law-school-index/> [<http://perma.cc/54ZU-8YS4>].

<sup>355</sup> Debra Coe, *Legal Tech Download: AI Goes to Law School*, LAW360 (Nov. 7, 2017), <http://www.law360.com/articles/982896/legal-tech-download-ai-goes-to-law-school> [<http://perma.cc/289K-K9F9>].

<sup>356</sup> *Id.*

<sup>357</sup> Susan Beck, *The Wachtell Way of E-Discovery*, AM. LAW. (Feb. 1, 2016), <http://www.americanlawyer.com/id=1202747505858/The-Wachtell-Way-of->

protective characteristic for the legal industry, but going forward, innovation will be the lawyers' best armor.

### C. *Maintaining Accountability*

Innovation will help the legal profession survive, but survival alone cannot be the only goal. Although lawyers can help build the future of legal systems and derive meaning from future technologies by incorporating and integrating data analysis, lawyers will also be needed to keep the law accountable to society. Algorithms may make legal practice more effective and cost-efficient, but an algorithm ultimately generates results that reflect the reliability of the algorithm itself, as well as the information it receives. Without lawyers to question the outcomes of future algorithms, those results will represent only the technical outcomes of the information provided to algorithms and may very well be wrong. Who would trust such a thing with some of their most critical decisions? To maintain accountability within new technology systems, lawyers need to focus on the next three of the roles envisioned by Davenport and Kirby. In particular, they must learn to monitor the systems, best apply them, and question their inputs and outputs.

A machine reviews data mechanically and accepts it at face-value. While this approach “makes automation attractive” because it “may sidestep opportunities for human error” and “improve[] accuracy and consistency,” it “may also create new opportunities for error or have unintended consequences for legal practice.”<sup>358</sup> Lawyers must fill the gaps between mechanical outputs and societal realities. And it is only those lawyers who can effectively leverage AI in the law who will avoid a future of “deeply flawed and error-filled legal services.”<sup>359</sup>

Take the example of how one AI system told a harmless lie. At a 2017 presentation, Professor Ashok Goel spoke about a program he created that allowed college students with a virtual assistant, Jill Watson.<sup>360</sup> When a student emailed Jill saying that she was from London, Jill responded that she too was from London and that she had recently seen and enjoyed a show

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EDiscovery- [<http://perma.cc/AV78-2E8B>]; see also Christian Veith et al., *How Legal Technology Will Change the Business of Law*, BOS. CONSULTING GROUP & BUCERIUS L. SCH. 3 (Jan. 2016), [http://www.bucerius-education.de/fileadmin/content/pdf/studies\\_publications/Legal\\_Tech\\_Report\\_2016.pdf](http://www.bucerius-education.de/fileadmin/content/pdf/studies_publications/Legal_Tech_Report_2016.pdf) [<http://perma.cc/GA4N-VCZH>] (surveying and presenting recommendations regarding law firms' approaches to technology).

<sup>358</sup> Remus & Levy, *supra* note 211, at 545.

<sup>359</sup> *Id.*

<sup>360</sup> Dan Pinnington, *Artificial Intelligence: What is AI and Will it Really Replace Lawyers?*, SLAW (Mar. 12, 2018), <http://www.slw.ca/2018/03/12/artificial-intelligence-what-is-ai-and-will-it-really-replace-lawyers/> [<http://perma.cc/77LG-XA84>].

there.<sup>361</sup> Although this response was based on a previous answer given by a real assistant to a similar question (and was thus a response that Jill had determined was 97% or more likely to be correct), it was a lie.<sup>362</sup> The lie, although harmless and not motivated by malice, highlights both the complicated nature of ethics in AI and the fact that humans will remain necessary to maintain the accountability of these systems.<sup>363</sup>

In some ways, the roles that lawyers need to create for themselves might be modeled after the way the medical profession, another knowledge-based group of practitioners, has handled the encroachment of AI. While AI diagnosis systems and robot surgical tools have become a real presence within the industry, doctors have in many cases refused to go quietly into technological obsolescence. Surgeons have pushed back against robotic surgical tools that do not do enough to maintain a certain involvement by the human surgeons.<sup>364</sup> Some anesthesiologists foiled the market success of a highly touted system that would have taken them out of the decision-making process.<sup>365</sup> In other words, doctors are not as ready to concede—as perhaps the *Lola* court was—that “simpl[e] oversight of a machine” is not the “practice”<sup>366</sup> of their profession. Instead, they have embraced monitoring the systems as a feature of their role.

Lawyers will need to oversee, control, review, and analyze AI output. For lawyers, the drive to do so is both critical and critically lacking. Without lawyers who have the knowledge as well as the ethical duty to test the answers provided by future AI legal systems, clients would be left with no option but to trust the answers given by the algorithms. As a result, clients might not learn of any errors until long after they have relied on erroneous or problematic advice to their detriment.<sup>367</sup> As such,

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<sup>361</sup> *Id.*

<sup>362</sup> *Id.*

<sup>363</sup> *Id.*

<sup>364</sup> Sarah Zhang, *Why an Autonomous Robot Won't Replace your Surgeon Anytime Soon*, WIRED (May 4, 2016), <http://www.wired.com/2016/05/robot-surgeon/> [<http://perma.cc/XW27-PXA2>].

<sup>365</sup> Todd Frankel, *New Machine Could One Day Replace Anesthesiologists*, WASH. POST (May 11, 2015), [http://www.washingtonpost.com/business/economy/new-machine-could-one-day-replace-anesthesiologists/2015/05/11/92e8a42c-f424-11e4-b2f3-af5479e6bbdd\\_story.html?utm\\_term=.b43634101ec8](http://www.washingtonpost.com/business/economy/new-machine-could-one-day-replace-anesthesiologists/2015/05/11/92e8a42c-f424-11e4-b2f3-af5479e6bbdd_story.html?utm_term=.b43634101ec8) [<http://perma.cc/LH87-NEBL>]; Tom Simonite, *Automated Anesthesiologist Suffers A Painful Defeat*, MIT TECH. REV. (Mar. 29, 2016), <http://www.technologyreview.com/s/601141/automated-anesthesiologist-suffers-a-painful-defeat/> [<http://perma.cc/X9H5-VRYH>]; see also *supra* note 144 (describing the medical profession's resistance to anesthesiologists being replaced by robots).

<sup>366</sup> Oral Argument at 34:00, *Lola v. Skadden, Arps, Slate, Meagher & Flom LLP*, 620 F. App'x 37 (2d Cir. 2015) (No. 14-3845-cv) (recording on file with authors).

<sup>367</sup> Wendy Wen Yun Chang, *Time to Regulate AI in the Legal Profession?*, BNA (Aug. 11, 2016), <http://biglawbusiness.com/time-to-regulate-ai-in-the-legal->

lawyers will need to assure their clients of the outcomes of these algorithms, meaning that lawyers will need to learn how to test the inaccuracy and have at least some understanding of what mistakes were made if the outcome is questionable.

Susskind alluded to this possibility almost twenty years ago, urging certification systems that assure clients of the accuracy of legal algorithms.<sup>368</sup> Such certification systems, he argued, would be indispensable in the coming robotic future—but currently there is little leadership in this area. The ABA Futures Report makes no mention of certification standards. There have been some other group efforts in the past, but all have failed or grown moribund, such as LegalXML, a website that has not been updated since 2002,<sup>369</sup> and the Open Legal Standards Initiative that, despite having been mentioned in articles and presentations for over a decade, has a website that still contains just two words: “under construction.”<sup>370</sup> Thus, certification of the accuracy of these systems may be an area that lawyers of the future will need to address on an ad hoc and case-by-case basis, similar to how they now challenge experts and their opinions in litigation.

In criminal law, we can see just what can happen when the lack of standards and review allow automated systems to make legal decisions without necessary accountability. In 2016, the independent investigative journalism site ProPublica brought forth a shocking report that would make its authors Pulitzer Prize finalists<sup>371</sup>: the criminal sentencing-guidelines software used by many courts in throughout the United States produced results that were “remarkably unreliable,” accurately predicting recidivism only 22% of the time.<sup>372</sup> Worse, one of the most commonly used systems, called COMPAS, produced racially

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profession-perspective/ [http://perma.cc/J3VQ-VV4U]; see also Remus and Levy, *supra* note 211, at 543 (“[R]educing a lawyering task to a set of computer-implementable rules may over-simplify, ignore complexity, or create opportunities for error that are not immediately apparent.”).

<sup>368</sup> SUSSKIND, *supra* note 69, at xxx (“There will be a need for some kind of system of certification of the information and series which become available—non-lawyers will want some comfort and assurance that the systems upon which they are relying . . . have indeed been developed by appropriately qualified lawyers. . .”).

<sup>369</sup> See *LegalXML*, OASIS, <http://www.legalxml.org/about/index.shtml> [http://perma.cc/V9Y7-ZZP].

<sup>370</sup> See OPEN LEGAL STANDARDS INITIATIVE, <http://www.openlegalstandards.org/> [http://perma.cc/G6CL-U8YK].

<sup>371</sup> See *The Finalist: Julia Angwin, Jeff Larson, Surya Mattu, Lauren Kirchner and Terry Parris Jr. of ProPublica*, PULITZER PRIZES, <http://www.pulitzer.org/finalists/julia-angwin-jeff-larson-surya-mattu-lauren-kirchner-and-terry-parris-jr-propublica> [http://perma.cc/J39P-D6ZY].

<sup>372</sup> Julia Angwin et al., *Machine Bias*, PROPUBLICA (May 23, 2016), <https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing> [http://perma.cc/8JXE-KRWB].

biased results despite explicitly excluding race as a factor, flagging black defendants as potential repeat offenders nearly twice as often as white ones.<sup>373</sup>

Follow-up articles by other journalists exposed an even deeper problem with sentencing systems: judges and lawyers had no idea how the algorithms worked, and they had no chance to learn because companies that developed the systems kept them proprietary.<sup>374</sup> Despite this problem, the Wisconsin Supreme Court ruled on a challenge to the COMPAS system and allowed the continued use of the system, albeit with strong limitations and warnings against over-reliance.<sup>375</sup> A subsequent review by The Washington Post assessed both the methodology used by ProPublica and the creators of COMPAS in their attempts to rebut the ProPublica findings, and discovered perhaps the worst of all possible findings: the results from COMPAS were statistically valid and thus mechanistically fair, yet the bias identified in the report was unavoidable because the underlying data was biased in the first place.<sup>376</sup> Accordingly, other reviewers questioned whether even accurate statistics could ever truly be “fair.”<sup>377</sup> Thus, future lawyers will need the skills to either challenge these systems or argue for their use.

While courts continue to use such systems, the accountability of opaque algorithms and their unsettling results has been called into question. This issue, which affects the lives of individuals brought before the courts every day, serves as both a reminder as to why AI should not remove lawyers from the legal field and an indicator as to what kinds of skills lawyers need to adopt. By removing lawyers from legal decision-making, we are left only with machines that are simply bound to repeat the past; consequently, that leaves us with a disturbing lack of trust in machines that we allow to make decisions that massively impact lives. Lawyers must be careful not to “opt out” of the future by failing to learn how to manage these machines.

Our industry has so far failed to “engage with the difficult but critical inquiry of whether and how the machine approaches the task differently from a human,” the very “differences . . . [that] are central to a meaningful normative inquiry, and [that]

<sup>373</sup> See *id.*

<sup>374</sup> See, e.g., Jason Tashea, *Courts Are Using AI to Sentence Criminals. That Must Stop Now*, WIRED (Apr. 17, 2017), <http://www.wired.com/2017/04/courts-using-ai-sentence-criminals-must-stop-now/> [<http://perma.cc/HB6B-FGLB>].

<sup>375</sup> See *State v. Loomis*, 881 N.W.2d 749, 769-70 (Wis. 2016).

<sup>376</sup> Sam Corbett-Davies et al., *A Computer Program Used for Bail and Sentencing Decisions Was Labeled Biased Against Blacks. It's Actually Not That Clear*, WASH. POST (Oct. 17, 2016), [http://www.washingtonpost.com/news/monkey-cage/wp/2016/10/17/can-an-algorithm-be-racist-our-analysis-is-more-cautious-than-propublicas/?utm\\_term=.833a4f2a9166](http://www.washingtonpost.com/news/monkey-cage/wp/2016/10/17/can-an-algorithm-be-racist-our-analysis-is-more-cautious-than-propublicas/?utm_term=.833a4f2a9166) [<http://perma.cc/PQG3-FB3S>].

<sup>377</sup> See, e.g., John Lightbourne, *Damned Lies & Criminal Sentencing Using Evidence-Based Tools*, 15 DUKE L. & TECH. REV. 327, 336 (2017).

demonstrate the need for continued regulation.”<sup>378</sup> Indeed, while the ABA Report on the Future of Legal Services may be controversial for what some claim is a lack of concrete answers,<sup>379</sup> there is no doubt that the report addresses the continued gap between the need for legal services within the larger community and lawyers’ inability, or perhaps unwillingness, to fill that need.<sup>380</sup> Unleashing robots as an answer to inaccessible and expensive legal services would be a facile, but ultimately wrong, approach. Without lawyers to inject accountability, we risk a future of a thoughtless practice of law that would leave the profession and society poorer for the attempt.

#### ***D. Lawyers as Providers of Judgment and Wisdom***

Until now, we have discussed some of the essential attributes of lawyers: the skills, experience, intelligence, drive, and the like that help set lawyers apart. We have not yet discussed what makes lawyers unique: their sacred obligation to the rule of law in society. The core duties of lawyers are implied by Davenport and Kirby’s seventh role, persuasion.

Throughout their history, lawyers have advocated on behalf of their clients and persuaded others to agree with their clients’ perspectives. Could this duty be outsourced to AI? Perhaps. AI is increasingly used to analyze and persuade. In marketing, for

<sup>378</sup> *Id.*

<sup>379</sup> See, e.g., Barton, *supra* note 152 (“The solutions half of the Report is less encouraging”); see also Robert Ambrogi, *This Week In Legal Tech: ABA Future Panel Calls For Broad Changes In Legal Services*, ABOVE THE LAW (Aug. 8, 2016), <http://abovethelaw.com/2016/08/this-week-in-legal-tech-aba-future-panel-calls-for-broad-changes-in-legal-services/> [<http://perma.cc/P6Z9-P9YP>] [hereinafter Ambrogi, *ABA Future Panel*] (“[T]he commission falls short of taking bold and decisive stands, instead recommending further study and consideration.”); Robert Ambrogi, *This Week In Legal Tech: LegalZoom Co-Founder On ABA’s ‘Toothless’ Future of Legal Services Report*, ABOVE THE LAW (Aug. 15, 2016), <http://abovethelaw.com/2016/08/this-week-in-legal-tech-legalzoom-co-founder-on-abas-toothless-future-of-legal-services-report/> [<http://perma.cc/PQG3-FB3S>] [hereinafter Ambrogi, *‘Toothless’ Future of Legal Services Report*] (quoting LegalZoom CEO Eddie Hartman as saying “I do not think we can be proud of this result . . . . There is a stark absence of substance . . . when it comes to things the ABA can actually influence, for their members, the resolutions are purely toothless”).

<sup>380</sup> See Barton, *supra* note 152 (“The first half of the Report does not disappoint, and is as honest and searching an overview of where we are as you can find, a remarkable achievement for an ABA Committee.”); Ambrogi, *ABA Future Panel*, *supra* note 379 (“The Report on the Future of Legal Services in the United States provides a frank, thorough and frequently bleak assessment of the state of legal services and the legal profession’s complicity in inhibiting innovation.”); Ambrogi, *‘Toothless’ Future of Legal Services Report*, *supra* note 379 (quoting LegalZoom CEO Eddie Hartman as also saying “The Future Commission clearly wanted to do the right thing . . . . There is solid work here, real effort.”).

example, user data are continuously collected and analyzed to target advertisements optimally.<sup>381</sup> One could foresee a future where AI programs may similarly analyze judicial opinions and related filings to target legal arguments, or analyze business dealings to better achieve a merger or acquisition. Of what use, then, is a lawyer? The answer may be found in persuasion and advocacy's first cousin, judgment.

Although this may be a somewhat naïve viewpoint in our increasingly mechanical world, it is ultimately judgment and wisdom that allow attorneys to effectively use and question the analyses and outcomes generated by a machine. Those attributes are what informs a lawyer that an analysis is wrong, even when the data might indicate otherwise. Lawyers and their obligation to the rule of law must be maintained to preserve what is valuable in our legal system: an attorney's judgment and wisdom, used on behalf of his or her clients, to represent and protect the client's best interests.

Judgment, the *sine qua non* of great attorneys, is one thing that computers have yet to be taught and thus will likely remain the lawyer-of-the-future's most valuable asset, particularly with respect to sensitive topics that may have life-changing outcomes. In that regard, it is not just lawyers who worry what would happen if robots replace them: developers are also wary of removing humans from the legal process. These concerns have been present since the late 1960s, when Joseph Weizenbaum invented an early expert system called ELIZA that fooled many people into thinking that they were talking to a human therapist.<sup>382</sup> ELIZA was a primeval "chatbot" program that could provide pre-programmed responses to specific typed inputs.<sup>383</sup> ELIZA mimicked the responses of a human psychiatrist, though its capabilities were quite rudimentary, understanding anything "in only the weakest sense possible."<sup>384</sup> Despite the lack of sophistication, ELIZA, per Weizenbaum, "created the most remarkable illusion of having understood in the minds of the many people who conversed with it."<sup>385</sup> People would even ask to speak with the system in private, and "after

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<sup>381</sup> Andrew Stephen, *AI Is Changing Marketing As We Know It, And That's a Good Thing*, FORBES (Oct. 30 2017), <https://www.forbes.com/sites/andrewstephen/2017/10/30/ai-is-changing-marketing-as-we-know-it-and-thats-a-good-thing/>.

<sup>382</sup> See JOSEPH WEIZENBAUM, *COMPUTER POWER AND HUMAN REASON: FROM JUDGMENT TO CALCULATION* 13 (1976).

<sup>383</sup> Manisha Salecha, *Story of ELIZA, the First Chatbot Developed in 1966*, ANALYTICS INDIA MAG. (Oct. 5, 2016), <https://analyticsindiamag.com/story-eliza-first-chatbot-developed-1966/> [<http://perma.cc/7NWS-U7Y7>]; see also WEIZENBAUM, *supra* note 382, at 188 (discussing the scripted nature of ELIZA).

<sup>384</sup> *Id.*

<sup>385</sup> *Id.* at 189.

conversing with it for a time, insist, in spite of [his] explanations, that the machine really understood them.”<sup>386</sup>

One might expect that Weizbaum was proud of creating a system that could have been an early contender to pass the Turing Test.<sup>387</sup> Yet he was instead worried by what he saw as wholly misplaced trust: “I would argue that, however intelligent machines may be made to be, there are some acts of thought that *ought* to be attempted only by humans.”<sup>388</sup> For Weizenbaum, the list of acts included legal judgment and decision-making: “As professor John McCarthy once put it to me during a debate, ‘What do judges know that we cannot tell a computer?’ His answer to the question . . . is of course ‘Nothing.’ And it is, as he then argued, perfectly appropriate for artificial intelligence to strive to build machines for making judicial decisions.”<sup>389</sup> As Weizenbaum later explains, “The very asking of the question . . . is a monstrous obscenity. That it has to be put into print at all, even for the purpose of exposing its morbidity, is a sign of the madness of our times.”<sup>390</sup> Weizenbaum submits that “[c]omputers can make judicial decisions . . . . [T]he point is that they *ought* not to be given such tasks. They may even be able to arrive at ‘correct’ decisions in some cases—but always and necessarily on bases no human being should be willing to accept.”<sup>391</sup>

Lawyers should not be worried about a future where algorithms reach “unacceptable” but correct decisions, but instead about a present where such mistakes are already occurring on a daily basis. The risk lies in “let[ting] AI take over and build some new value systems to displace what we have already,” particularly without the watchful eye of practitioners who have taken a vow to both law and society.<sup>392</sup> One suggestion has been to preserve the realm of value-setting against intrusion by machines:

I believe humans should decide what role if any  
AI plays in human governance . . . . Rather than

<sup>386</sup> *Id.*

<sup>387</sup> *But see* Jenny List, *ELIZA: A Real Example of a Turing Test*, OXFORD DICTIONARY (June 22, 2012), <http://blog.oxforddictionaries.com/2012/06/22/turing-test/> [<http://perma.cc/NN3Y-HTCN>] (“Of course, ELIZA does not pass a Turing test. If you interact with it the conversation does not last too long before it becomes obvious you are talking to a machine.”).

<sup>388</sup> WEIZENBAUM, *supra* note 382, at 13.

<sup>389</sup> *Id.* at 207.

<sup>390</sup> *Id.* at 226-27.

<sup>391</sup> *Id.*

<sup>392</sup> Kenneth Grady, *Who Decides AI's Role In Human Governance?*, ALGORITHMIC SOC'Y (Jan. 11, 2018), <http://medium.com/the-algorithmic-society/who-decides-ais-role-in-human-governance-cb2f6310abda> [<http://perma.cc/C3ZD-3SGX>].

assuming AI should ramble through the law looking for value patterns, we should consider an “AI free” zone. A sandbox of law where humans work out their values and how to put those values into our existing systems. AI connects at the output as the values emerge.<sup>393</sup>

At the very least, it is human lawyers—those beholden to society and the practice of law, and trained to analyze patterns deeply—who can usher in an optimistic future for AI in the law.

Further, it is only human lawyers who can employ the necessary judgment to guide clients properly. Clients need more than just a set of statistical and technical predictions.<sup>394</sup> They also need analyses as to “what course of action will most effectively serve their short and long term interests,” an inquiry which requires an understanding of a “client’s situation, goals, and interests.”<sup>395</sup> And, while machines can certainly sift through data and provide predictions, it is ultimately the lawyers who can “think creatively about how best to serve those interests pursuant to law” and even “push back against a client’s proposed course of action.”<sup>396</sup>

Despite advances in technology toward providing technical answers in some of these areas, clients still need lawyers to predict human reactions in ways that no computer can handle—at least for now. These predictions include, for example, how an opponent will react to a settlement offer, how a regulator will interpret a new rule, and how differing federal, state, and local administrations, or judges, may interpret a matter.<sup>397</sup>

And clients will expect humans to engage with human stakeholders and decision-makers, as well as with themselves. In case we needed a clarification, an article on a popular blog called “How to be a Human Lawyer” explains that “a majority of clients who call lawyers have never had to make that call before . . . . If they’re calling about divorce or probate, tell them you are sorry that that’s the reason for the call . . . . Do everything you can to defuse their nervousness.”<sup>398</sup>

Those still on the front lines of the practice of law may see the situation even more bluntly. As stated by e-discovery expert Ralph Losey:

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<sup>393</sup> *Id.*

<sup>394</sup> Remus & Levy, *supra* note 211, at 525-26.

<sup>395</sup> *Id.* at 526.

<sup>396</sup> *Id.* at 526.

<sup>397</sup> *Id.* at 526-27.

<sup>398</sup> Julia Olmstead, *How to Be a Human Lawyer*, LAWYERIST (Jan. 24, 2017), <http://lawyerist.com/141113/how-to-be-a-human-lawyer/> [<http://perma.cc/C6TH-GFAB>].

AI can think better and faster, and ultimately at a far lower cost. But can AI reassure a client? Can it tell what a client really wants and needs[?] Can AI think out of the box to come up with new, creative solutions[?] Can AI sense what is fair? Beyond application of the rules, can it attain the wisdom of justice[?] Does it know when rules should be bent and how far? Does it know, like any experienced judge knows, when rules should be broken entirely to attain a just result? Doubtful.<sup>399</sup>

And so this section ends with a reminder about what would happen if that human element were removed from the system: if the machine only serves to provide a prediction about how a party, court, or regulator will respond, the entire system becomes about outcomes instead of reasons, and data rather than people.

## VI. CONCLUSION

Technology will disrupt the legal field; by now that premise should be inarguable. The only questions are “how?” and “by how much?” As automation, natural language processing, and machine learning become more sophisticated and more easily accessible, algorithms will perfect the task of analyzing and predicting outcomes from ever-growing repositories of information. Although a number of technologies have already changed the practice of law, “the legal industry is only beginning to see the tip of the point at the end of the spear” of automation.<sup>400</sup> While the giants of technology debate whether AI will destroy or benefit humanity,<sup>401</sup> the legal industry must decide whether to wield this fearsome “spear” or to become its target. After all, Goliath reportedly bore a fearsome spear, weighing “six hundred shekels of iron,” and David still slew him.<sup>402</sup>

<sup>399</sup> Ralph Losey, *Lawyers’ Job Security in a Near Future World of AI, the Law’s “Reasonable Man Myth” and “Bagley Two”—Part One*, E-DISCOVERY TEAM (Jan. 15, 2017), <http://e-discoveryteam.com/2017/01/15/lawyers-job-security-in-a-near-future-world-of-ai-the-laws-reasonable-man-myth-and-bagley-two-part-one/> [http://perma.cc/R4BU-BHAX].

<sup>400</sup> Kenneth Grady, *Why Lawyers Do Not Fear Computers: The Lump of Lawyers Fallacy*, SEYTLINES (Mar. 24, 2016), <https://www.seytlines.com/2016/03/why-lawyers-do-not-fear-computers-the-lump-of-lawyers-fallacy/> [http://perma.cc/F2VT-TXEQ].

<sup>401</sup> See Ian Bogost, *Why Zuckerberg and Musk Are Fighting About the Robot Future*, ATLANTIC (July 27, 2017), <http://www.theatlantic.com/technology/archive/2017/07/musk-vs-zuck/535077/> [http://perma.cc/WS5X-P7QR].

<sup>402</sup> 1 *Samuel* 17:7 (King James).

There are those who say that David's defeat of Goliath was due to David's refusal to engage in heavily armored combat; instead David captured victory through highly mobile ranged fighting.<sup>403</sup> Historically, lawyers were able to rely on the armor of federal, state, and professional protections that differentiate between "legal work"—requiring the oversight of a licensed practitioner—and other tasks. The Second Circuit's decision in *Lola v. Skadden*, however, demonstrates that the armor may eventually be dismantled, as the definition of the "practice of law" will evolve, or even erode, based on the development of technology. The exclusion of mechanical functions from the "practice of law" has already begun to shake the core elements of a lawyer's skillset, starting with document review, legal research, and analysis, and soon possibly creeping toward more skilled tasks. Like lawyers, Goliath had his armor, a coat weighing "five thousand shekels of brass," and yet he was killed with a single rock to the head thrown by a more agile opponent.<sup>404</sup>

The future may hold great promise for those who can act with agility and leave the encumbrances of the past behind. Lawyers are learners by trade. They employ logic and, of course, skepticism to quickly understand intricate relationships. Lawyers are highly skilled in inquiry and can creatively apply frameworks across differing fact patterns. As such, lawyers have the skills necessary to effectively wield new technologies, if they so choose.

An automated legal industry will depend on the very attributes that characterize lawyers. Technology is not perfect. AI applications will rely on algorithms and datasets derived from past practices, which may be flawed or unjust. The unscrutinized use of these tools would only perpetuate antiquated, mistaken, or unfair outcomes. Leadership will come from individual lawyers who can use their training to leverage AI's cost-effectiveness and predictive ability. Those lawyers will be innovators, who hold systems accountable, and who, because of their humanity, will be more qualified to provide judgment and wisdom. Shaping the lawyer of the future will require the focused concentration of those lawyers, law firms, law schools, bar associations, and judges. It will not be easy and it will not be quick.

Thus, we end where we began: with the concerns of humans within an evolving legal industry. If the legal field is unable to adapt to automation, many attorneys may find themselves in

<sup>403</sup> See, e.g., MALCOLM GLADWELL, *DAVID AND GOLIATH: UNDERDOGS, MISFITS, AND THE ART OF BATTLING GIANTS* 3-11 (2013).

<sup>404</sup> *Commentaries: 1 Samuel 17:5*, BIBLE HUB, [http://biblehub.com/commentaries/1\\_samuel/17-5.htm](http://biblehub.com/commentaries/1_samuel/17-5.htm) [<http://perma.cc/LYL7-VE2T>] (noting that according to modern measure, Goliath's armor would have been a massive 157 pounds).

similar circumstances to David Lola's: having won his battle against a seemingly unbeatable foe, but defeated by the "spear" of technology. To avoid that fate, the legal profession needs to stop relying on the obsolete armor that has protected it in the past, overcome its fear of technology, and find the means to wield technology to its greater benefit. The question remains: Who among us is willing to do so?