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Thomas R. Moore

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THE UPGRADED LAWYER:

MODERN TECHNOLOGY AND ITS IMPACT ON THE LEGAL PROFESSION

Thomas R. Moore*

INTRODUCTION

At the peak of the Space Race in 1963, President John F. Kennedy remarked that, despite the great leaps brought by technology, “man is still the most extraordinary computer of all.”¹ With the advent of the internet and artificial intelligence, today’s technological advancements might have shaken even Kennedy’s faith in human superiority. For the legal profession, new technology presents a challenge to traditional notions in the practice of law as well. Clients may grow to expect tech-savviness from their attorneys, especially when their cases involve digital concepts. At the same time, the necessity for flesh-and-blood counsel may be diminished by internet-based legal resources. Despite such a sea change, history suggests that lawyers need not fear becoming obsolete just yet.

Historically, the legal profession has been resilient in the face of tectonic shifts in technology. Whether it is the advent of the steam engine, the automobile, or the computer, lawyers have been able to respond to these upheavals with the zeal of gaining a new client. Indeed, the vast majority of our American jurisprudence is composed of lawyers and judges sifting through unknown legal terrain in order to carve out new precedent, often in direct response to innovation wrought by a new technological advancement or trend. Abraham Lincoln, prior to being elected president in 1861, practiced law for more than 25 years.² During that era, the expanding might of the railroad industry created opportunities for Lincoln to litigate.³ In fact, Lincoln crafted arguments that helped courts address the novelty and legal dilemma presented by railroads.⁴ Similarly, lawyers should embrace the disruptiveness of internet devices, robotics, and artificial intelligence by

* Thomas Moore is a 2018 *magna cum laude* graduate of the University of the District of Columbia’s David A. Clarke School of Law. As a law student, Thomas was a Senior Editor on UDC’s Law Review and a Student Attorney with the school’s Legislation Clinic and Housing & Consumer Law Clinic. Currently, he is a Law Fellow with AARP Foundation where he assists with consumer protection and health care litigation. Thomas also studied at the American University’s School of Public Affairs, where he earned his B.A. in Political Science.

¹ John F. Kennedy, Remarks Upon Presenting the NASA Distinguished Service Medal to Astronaut L. Gordon Cooper (May 21, 1963), <https://www.presidency.ucsb.edu/node/236468>.

² Savannah M. Fox, Abraham Lincoln, Contract Disputes, and Remediating Legal Inefficiencies (2015) (unpublished B.A. thesis, Wittenberg University) (on file with the Ohio Library and Information Network).

³ See *id.*

⁴ See *id.* at 28.

welcoming the prospect of developing unique legal arguments and seeing what sticks.⁵ In effect, waiting for a clear legal precedent to emerge will be a long time coming. As a result, lawyers that are stalling until then are merely sticking their heads in the sand. Instead they must reconcile with the continuing spread of artificial intelligence, internet connectivity, and robotics affecting their clients and accept that the dawn of machines has arrived.

As legal experts, lawyers should strive to create solutions that address the onslaught of legal problems sparked by new technology. Clients expect lawyers to be able to provide counsel on the legal ramifications of their choices. Factoring technology into this equation is a logical extension of this relationship. While technology might be new and bewildering to a lawyer, a client will not excuse ignorance on such grounds. Accordingly, lawyers will have to fight the compulsion to behave as though nothing has changed, as clients face a variety of new risks to their financial and privacy interests posed by hackers, scams, and security breaches.

Adapting to modern technological changes will depend on recognizing that certain legal definitions will have to be reconsidered. With the prevalence of smartphones and cloud storage, determining what constitutes a person's property is now a more mystifying prospect.⁶ Modern technology has twisted boundary lines, given the ethereal nature of the internet. Digital assets represent a new legal issue for lawyers to confront and develop standards for, much in the way railroads and automobiles spurred on a host of new legal challenges. Moreover, the traditional barriers of contact and communication have been eroded by the popularity of internet devices. In this area, there lie significant risks that users of such devices are encountering. Namely, criminals are afforded a new venue to exploit clients. This threat is only likely to grow as the internet becomes more ingrained into society. Thus, lawyers who can appreciate how the internet can be weaponized could be more desirable to computer-savvy clients. To do otherwise would be a disservice to an attorney's duty to their client and to their professional responsibility to remain competent.

In a tech-driven world, lawyers must strive to stay relevant and technologically competent. Understanding even the rudimentary aspects of computers and smartphones allows lawyers to relate to their clients. More importantly, such knowledge allows a lawyer to respond to a client's legal issues sensibly, imbued with a nuanced comprehension of how their problems arose. In order to uphold their obligation to clients, lawyers have to accept that traditional legal solutions may no longer cut it in today's high-tech environment.

Ultimately, attorneys should strive to understand the potential legal minefields produced by new technology. Lawyers should open their eyes to the reality that machines have crept into almost every aspect of our lives—including the legal profession. Staying up-to-date and ahead of the

⁵ See generally Bernard Marr, *Why Everyone Must Get Ready For The 4th Industrial Revolution*, FORBES (Apr. 5, 2016, 2:38 AM), <http://www.forbes.com/sites/bernardmarr/2016/04/05/why-everyone-must-get-ready-for-4th-industrial-revolution/>.

⁶ Michelle Maltais, *Who Owns Your Stuff in the Cloud?*, THE LOS ANGELES TIMES (Apr. 26, 2012).

competition, which now includes robotic rivals that are steadily adding new legal skills to their repertoire, lawyers must not shrink away from the appendages of Silicon Valley.

Thus, the only certain way to understand a client's plight with their hard-earned digital assets or an online catastrophe is for attorneys to engage in the growing integration of modern technology and the legal profession. In recognition of this prospect, this article seeks to examine the changes and conflicts presented by unfolding technological advancements. In turn, this article posits that technological competence will be a growing necessity for attorneys. Numerous factors, which will be explored below, will likely put pressure on lawyers to stay up-to-date on modern technology. These factors could include artificial intelligence, the scarcity of affordable counsel, the prevalence of digital assets, and a host of currently unknown developments. At any rate, the role of attorney appears to be shifting in line with our tech-dependent world.⁷ For the sake of their clients and their professional standing, lawyers should be vigilant and pay heed to the developments examined below.

I. I, ROBOT, ESQUIRE

The idea of robots handling tasks typically assigned to humans is no longer relegated to science fiction. After all, we welcome computerized versions of almost every convenience available. According to a 2015 survey, sixty-eight percent of adults in the United States currently own a smartphone, and seventy-three percent of adults own a desktop or laptop computer.⁸ Beyond such internet devices, consumers have sought "smart" (i.e., computerized or internet-connected) watches, televisions, stereos, thermostats, and even refrigerators.⁹ As a result, virtually no profession has resisted the emergence of Internet devices. Gone are the days where lawyers must maintain a written compilation of a jurisdiction's laws and regulations. With the emergence of LexisNexis and Westlaw as research tools and databases, a lawyer's ability to navigate relevant statutes and legal precedent has never been more efficient.

To that end, reminders can be programmed into a lawyer's phone and computer, ensuring that a preoccupied attorney does not forget about a critical deadline. Smartphones have also provided lawyers with a constant connection to clients and colleagues, which is perhaps both a blessing and a curse. Yet these advances have also instilled a fear in some lawyers that their utility will be diminished by less fallible machine counterparts.¹⁰ The primary duties of an attorney to research, analyze, write, and argue are roles that machines are certainly capable of handling, seemingly in a more relentless and superior fashion given the inherent capacity to error-check and never tire.¹¹

⁷ See Jordan Weissmann, *iLawyer: What Happens When Computers Replace Attorneys?*, THE ATLANTIC (June 19, 2012), <http://www.theatlantic.com/business/archive/2012/06/ilawyer-what-happens-when-computers-replace-attorneys/258688/>.

⁸ Monica Anderson, PEW RESEARCH CENTER, TECHNOLOGY DEVICE OWNERSHIP: 2015 (Oct. 29, 2015), <http://www.pewinternet.org/2015/10/29/technology-device-ownership-2015/>.

⁹ Ken Black, *What is a Smart Refrigerator?*, WISEGEEK (Mar. 23, 2018), <http://www.wisegeek.com/what-is-a-smart-refrigerator.htm>.

¹⁰ See Weissmann, *supra* note 7.

¹¹ Joe Palazzolo, *Why Hire a Lawyer? Computers Are Cheaper*, THE WALL STREET JOURNAL (June 18, 2012, 2:06 PM), <http://online.wsj.com/article/SB10001424052702303379204577472633591769336.html>.

While robots and computers are not displacing lawyers just yet, their presence can already be felt in firms and law schools.¹² For starters, the vast databases of LexisNexis and Westlaw give a preview of what a machine could produce.¹³ The prospect that such computer-assisted legal research will become a requisite feature for law firms seeking to gain a competitive edge could trigger a technological arms race, where firms battle to impress clients by acquiring the latest and greatest forms of artificial intelligence and legal software.¹⁴ Law firms may find themselves pushing some lower-level associates out the door as they accept greater numbers of computer programs into their ranks. Firms may see this as a mere efficient means to have their clerical work completed. However, such decisions represent momentous shifts for the legal industry, which could be transformed beyond recognition if this trend continues.

A. Watson's Rise

For attorneys, the ominous idea that computers will not only be compiling legal research, but making the arguments as well is no longer a far-flung notion.¹⁵ Given the advancements in artificial intelligence, the idea of a computer-crafted legal strategy is no longer just science fiction. A truly “robotic lawyer” has not yet arrived, but to deny the possibility as utterly impossible seems myopic. Robots have proven to be adept at a multitude of activities that were once thought as only capable of being done by humans.¹⁶ From learning and mastering the game of chess¹⁷ to beating even the stiffest competition in a game of “Jeopardy!,” such computing advancements demonstrate the potential for computers to solve problems more significant than games.¹⁸ In fact, the computer who won “Jeopardy!,” an I.B.M. “question answering machine” named Watson, was originally developed in order to help medical professionals make more accurate diagnoses by eliminating human limitations.¹⁹ The need for accuracy and eliminating human limitations is equally applicable in the legal world. By that logic, developing a version of Watson for the legal profession is merely a matter of time.

The utility of Watson may be suitable for the legal profession already. After all, the nature of problem solving for doctors is not so different for lawyers. Both professions “diagnose” those who seek their advice and determine what the right “treatment” should be. The knowledge may be

¹² See generally David Hall, *Google, Westlaw, LexisNexis and Open Access: How the Demand for Free Legal Research Will Change the Legal Profession*, 2012 SYRACUSE SCI. & TECH. L. REP. 119 (2012).

¹³ *Id.*

¹⁴ *Id.*

¹⁵ See Palazzolo, *supra* note 11.

¹⁶ See Weissmann, *supra* note 7.

¹⁷ See Bryan Bishop, *Deep Blue: 15 years after IBM's supercomputer beat the chess world's champ*, THE VERGE (May 11, 2012, 8:10 PM), <http://www.theverge.com/2012/5/11/3015223/deep-blue-15-year-anniversary-kasparov>.

¹⁸ See John Markoff, *Computer Wins on 'Jeopardy!': Trivial, It's Not*, THE NEW YORK TIMES (Feb. 16, 2011), <http://www.nytimes.com/2011/02/17/science/17jeopardy-watson.html?pagewanted=all>.

¹⁹ See *id.*; See also Jonathan Cohn, *The Robot Will See You Now*, THE ATLANTIC (Mar. 2013), <http://www.theatlantic.com/magazine/archive/2013/03/the-robot-will-see-you-now/309216/>.

different, but the need to assess problems and find the right solution from a torrent of information remains the same. If Watson can provide meaningful assistance to doctors, I.B.M. can more than likely tweak Watson's programming in order for lawyers to benefit as well. Marty Kohn, a leader of the I.B.M. team in charge of readying Watson for healthcare usage, noted how "[s]tudies show that humans are good at taking a relatively limited list of possibilities and using that list, but are far less adept at using huge volumes of information. That's where Watson shines: taking a huge list of information and winnowing it down."²⁰ The utility of a computer that can sort through dense, complex information and produce answers unburdened by typical human biases is a compelling prospect, especially for the legal industry.²¹ Machines like Watson, embedded with search engines, would be able to sort through the endless bales of legal information to find relevant case law faster and more efficiently than any human attorney could hope to match.²²

A classic dilemma of any law office is how to handle the slew of paperwork inherent to a difficult case. Rather than hire an attorney or divert resources to complete tedious form-filling, law firms have another lucrative option available: let a computer do it. Take for instance the task of sorting through documents for discovery, which has typically entailed slogging through thousands (if not millions) of documents in order to find any relevant passages. Computers can excel in this task as they have the capability to read and analyze millions of pages faster and more accurately than a human.²³

A 2011 article in the *Richmond Journal of Law and Technology* analyzed results from a 2009 Text Retrieval Conference that appeared to demonstrate how technology-assisted processes can achieve high levels of recall and precision on document review.²⁴ By studying those results more in-depth, the authors found that humans unearthed an average of about sixty percent of relevant documents by doing a manual review of an entire document collection, while automated computer searches identified an average of seventy-seven percent from the same collection.²⁵ The authors concluded that, based on such statistical evidence, "the myth that exhaustive manual review is the most effective – and therefore, the most defensible – approach to document review is strongly refuted. Technology-assisted review can (and does) yield more accurate results than exhaustive manual review, with much lower effort."²⁶

Placing computers in charge of reviewing documents presents a tantalizing opportunity not just to clients, but to investors as well. The flow of money often reveals where legal technology is headed as investors chase "game-changing" innovations. Recently, the venture capital firm, Invoke Capital, made a multi-million dollar investment in Luminance, a company that is developing artificial intelligence (AI) to automate the usual legal processes of corporate mergers and

²⁰ Cohn, *supra* note 19.

²¹ See generally Marr, *supra* note 5.

²² Hall, *supra* note 12.

²³ *Id.*

²⁴ Maura R. Grossman & Gordon V. Cormack, *Technology-Assisted Review in E-Discovery Can Be More Efficient Than Exhaustive Manual Review*, 17 RICH. J.L. & TECH. 11, 1-48 (2011).

²⁵ *Id.* at 16-18.

²⁶ *Id.* at 48.

acquisitions.²⁷ Luminance purports that its software can read and understand hundreds of pages of legal documents a minute, freeing lawyers from having to grind through such work.²⁸ Lawyers will be able to use this spare time to conduct regular due diligence more efficiently. With less time needed to sort through documents, lawyers can spend time bolstering their research or strategizing their options. Sally Wokes, a lawyer who works on mergers for a large international law firm, found that Luminance enabled her firm to conduct document review at a pace fifty percent faster than when they used humans alone.²⁹

Luminance's Chief Executive Officer, Emily Foges, explains that the success of the program is due to the fact that it is designed to "think like a lawyer."³⁰ The software can highlight important information without needing to be told what specifically to look for.³¹ Rather than employing attorneys to scan through thousands of documents to identify possible issues, these lawyers can now devote their time to analyzing the software's findings and negotiating deal terms, Foges said.³² The innovative capability for software such as Luminance to handle these tasks is impressive. The novelty of employing such a tool is sure to impress a few clients and make rote legal tasks more tolerable.

Of course, legal computer software like Luminance bring to the table much more than just accuracy. Such computer programs never fatigue in the manner that humans do.³³ Luminance and other programs are ostensibly able to review documents even when the rest of the firm has gone home for the evening. For law practices, this beneficial arrangement offers an enormous advantage, as the relentless pace a computer works at is virtually impossible for ordinary humans to match. The elimination of fatigue as a factor in document review can greatly assist firms that are beleaguered by overworked attorneys whose tired eyes are susceptible to making careless mistakes.

Perhaps the most remarkable aspect of Watson and Luminance's arrival is not merely their sophisticated software, but rather the possible impact they pose to the legal profession as a whole.³⁴ As computers increasingly handle the more menial jobs, a lawyer's duties will undoubtedly evolve as they are unburdened. Like I.B.M. and Luminance, other companies have grasped the enormous potential of AI to serve the legal industry.³⁵ ROSS Intelligence is one such firm that has built a

²⁷ See Elaine Ou, *Why Hire a Lawyer When a Robot Will Do?*, BLOOMBERG (Sept. 22, 2016, 3:00 AM), <https://www.bloomberg.com/view/articles/2016-09-22/why-hire-a-lawyer-when-a-robot-will-do>.

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ See Palazzolo, *supra* note 11.

³⁵ Chris Weller, *Law Firms of the Future will be Filled with Robot Lawyers*, BUSINESS INSIDER (July, 7, 2016, 12:09 PM), <http://www.businessinsider.com/law-firms-are-starting-to-use-robot-lawyers-2016-7>.

program that they call “the world’s first artificially intelligent attorney.”³⁶ Similar to Luminance, ROSS utilizes software to rapidly sift through thousands of legal documents to bolster a firm’s case, and in the process, free up the time of lawyers who would usually be relegated to handle such grunt work.³⁷

Indeed, a future where machines like ROSS, Watson, or Luminance are common fixtures at law firms might be closer than we realize.³⁸ According to Ryan Calo, a law professor and writer who focuses on the intersection of technology and law: “The use of complex software in the practice of law is commonplace—for instance, in managing discovery Eventually, I bet *not* using these systems will come to be viewed as antiquated and even irresponsible, like writing a brief on a typewriter.”³⁹ That possibility is very much in line with the goal of ROSS Intelligence’s CEO and co-founder, Andrew Arruda, who believes that “AI-enabled software is going to become very much the status quo and very normal.”⁴⁰

II. ROBOTS TO THE RESCUE

Despite their impressive capabilities, the rise of the machines could serve as a mixed blessing for the legal profession. Similar to the ongoing trend in manufacturing, where automation has created factories that need fewer workers, high-tech machines like ROSS and Watson may diminish the demand for associate lawyers who would normally be conducting the usual research, compilation, and analysis work for the firm.⁴¹ Consequently, as more computers arrive with the capability to find relevant case law and documents, the utility of paying lawyers to complete these tasks is diminished.

A. Scarcity of Affordable Legal Services

Beyond making firms more efficient, technology could benefit clients as well, especially those who may not otherwise be able to afford an attorney. Technology like ROSS and Luminance could eventually be marketed to consumers unable to retain an expensive attorney. While lawyers may fear that an army of robots will take away their jobs, the more immediate effect is unlikely to be so drastic.⁴² Human lawyers will still have their own role to play.⁴³ Tasks like advising clients, writing legal briefs, negotiating, and appearing in court seem beyond the reach of computerization,

³⁶ Karen Turner, *Meet ‘Ross,’ the Newly Hired Legal Robot*, THE WASHINGTON POST (May 16, 2016), https://www.washingtonpost.com/news/innovations/wp/2016/05/16/meet-ross-the-newly-hired-legal-robot/?utm_term=.19253d04e756.

³⁷ *Id.*

³⁸ James O’Toole, *Here Come the Robot Lawyers*, CNN (Mar. 28, 2014, 7:16 AM), <http://money.cnn.com/2014/03/28/technology/innovation/robot-lawyers/>.

³⁹ Turner, *supra* note 36.

⁴⁰ Weller, *supra* note 35.

⁴¹ Weller, *supra* note 35.

⁴² Weller, *supra* note 35.

⁴³ Weller, *supra* note 35.

for the immediate future.⁴⁴ Attorneys well-versed in strategy, creativity, judgment, and empathy have little to fear from legal technology, as those efforts cannot yet be automated. Instead, automated legal services can assist humans by letting them worry about legal work beyond rote document review. Additionally, technological advancements could help advance a long-standing goal of the legal profession: providing accessibility and knowledge of the law to more of those who seek it.

Being of lower socioeconomic status generally translates to a restriction of choices. Without adequate funds, the option of shopping around for the most qualified attorney is non-existent. Impoverished individuals have to either go without legal help, or hope for *pro bono* assistance.⁴⁵ The inability for most Americans to afford adequate legal advice has long festered as a blight on the legal system.⁴⁶ In seventy to ninety-eight percent of cases in America's civil courts today, one or both parties are not represented by a lawyer.⁴⁷ Sadly, the merits of a case are often not the determinative factor, but rather who can afford the most lavish legal representation. One of the prevailing factors driving the predominance of *pro se* representation is that legal help has become very expensive—"about \$200 to \$300 an hour on average and drastically higher at the largest law firms."⁴⁸ Considering that most Americans have less than \$1,000 in savings, such fees place legal counsel out of reach to many.⁴⁹

While numerous solutions have been put forth to address this disparity, like increasing funding for legal aid services and improving public defender offices, these often fall short in bridging the legal representation gap between the wealthy and poor.⁵⁰ Legal aid organizations are admirable for their efforts and make quality legal counsel available to lower-income clients, but such groups are frequently hamstrung by budget cuts to their funding or from overtaxed lawyers juggling too many cases.⁵¹ In *Gideon v. Wainwright*, the right to court-appointed counsel for the indigent in criminal

⁴⁴ *Id.* ("Though some employees will no doubt lose their jobs (as tends to happen when AI enters the scene), the benefits of AI quickly trickle down for both a firm and its clients.")

⁴⁵ See Helen A. Anderson, *Penalizing Poverty: Making Criminal Defendants Pay for Their Court-Appointed Counsel Through Recoupment and Contribution*, 42 U. MICH. J.L. REFORM 323, 370-71 (2009); See also Kate Levine, Note, *If You Cannot Afford a Lawyer: Assessing the Constitutionality of Massachusetts's Reimbursement Statute*, 42 HARV. C.R.-C.L. L. REV. 191, 193 (2007).

⁴⁶ LEGAL SERVICES CORPORATION, DOCUMENTING THE JUSTICE GAP IN AMERICA: THE CURRENT UNMET CIVIL LEGAL NEEDS OF LOW-INCOME AMERICANS AN UPDATED REPORT (2009), https://www.lsc.gov/sites/default/files/LSC/pdfs/documenting_the_justice_gap_in_america_2009.pdf.

⁴⁷ Jessica K. Steinberg, *Demand Side Reform in the Poor People's Court*, 47 CONN. L. REV. 741, 743 (2015).

⁴⁸ Martha Bergmark, *We Don't Need Fewer Lawyers. We Need Cheaper Ones.*, THE WASHINGTON POST (June 2, 2015), <https://www.washingtonpost.com/posteverything/wp/2015/06/02/we-dont-need-fewer-lawyers-we-need-cheaper-ones/>.

⁴⁹ Quentin Fottrell, *Most Americans Have Less Than \$1,000 in Savings*, MARKET WATCH (Dec. 23, 2015, 10:01 AM), <http://www.marketwatch.com/story/most-americans-have-less-than-1000-in-savings-2015-10-06>.

⁵⁰ Leroy D. Clark, *All Defendants, Rich and Poor Should Get Appointed Counsel in Criminal Cases: The Route to True Equal Justice*, 81 MARQ. L. REV. 47, 52 (1997).

⁵¹ See Steinberg, *supra* note 47.

cases was extended to civil cases as well.⁵² Instituting a “civil *Gideon*” is one feasible path to equal access to legal representation.⁵³ The idea of providing free legal counsel to poor civil litigants initially appears to be a sensible plan for addressing the inequities of our judicial system. However, the idea that representation could be offered so broadly, while also sufficiently compensating lawyers and ensuring that they are not overworked is problematic.⁵⁴ Civil *Gideon* advocates, while commendable for their pursuit of a too glaring flaw of the justice system, are overlooking the fundamental human limitations undermining such a fix.⁵⁵

Moreover, if civil litigation becomes less expensive for clients, then it is natural to assume there will be more of it.⁵⁶ Making counsel available for free to any party below a certain income level warrants that disputes capable of being settled outside the courtroom will instead become clogs in an increasingly overloaded justice system.⁵⁷ Such a prospect poses problems for attorneys who may not have the resources to engage in such long, court-mandated disputes. In effect, even if a civil *Gideon* were mandated, there is no guarantee that the existing population of attorneys would be able to handle such a sudden increase in their caseload.⁵⁸ This is where advancements in legal technology can step in, as legal software has the inherent potential to be made more broadly available than a highly-educated, licensed attorney could ever be.⁵⁹

While programs like Luminance and ROSS may be pricey, the concept of making basic legal services available outside a law office is possible as more advancements are creating similar software.⁶⁰ Such developments could enable greater access to legal services and knowledge for those who may otherwise lack the capacity to afford a lawyer. The goals of implementing a civil *Gideon* system might be achieved without overwhelming the legal profession. In particular, efficiency and productivity enhanced by technology could serve as a lifeline for overtaxed lawyers. Indeed, in many jurisdictions, public defenders struggle to find time to adequately counsel all of their clients.⁶¹ This troubling aspect of our justice system is worth examining in the context of technological developments because there does not appear to be an easy fix in sight.⁶² If technology

⁵² *Gideon v. Wainwright*, 372 U.S. 335, 341–43 (1963); See also Ted Frank, *The Trouble with the Civil Gideon Movement*, AMERICAN ENTERPRISE INSTITUTE (Aug. 7, 2008), <https://www.aei.org/publication/the-trouble-with-the-civil-gideon-movement/>.

⁵³ Frank, *supra* note 52.

⁵⁴ *Id.*

⁵⁵ Barbara Bezdek, *Silence in the Court: Participation and Subordination of Poor Tenants' Voices in the Legal Process*, 20 HOFSTRA L. REV. 533, 538 n.16 (1992).

⁵⁶ See O'Toole, *supra* note 38.

⁵⁷ See Bergmark, *supra* note 48.

⁵⁸ See Erica Hashimoto, *Defending the Right To Self-Representation: An Empirical Look at the Pro Se Felony Defendant*, 85 N.C.L. REV. 423, 469 (2007).

⁵⁹ See O'Toole, *supra* note 38.

⁶⁰ See O'Toole, *supra* note 38.

⁶¹ Tina Peng, *I'm a Public Defender. It's Impossible for me to do a Good Job Representing my Clients.*, THE WASHINGTON POST (Sept. 3, 2015), https://www.washingtonpost.com/opinions/our-public-defender-system-isnt-just-broken--its-unconstitutional/2015/09/03/aad2b6c-519b-11e5-9812-92d5948a40f8_story.html.

⁶² See Campbell Robertson, *In Louisiana, the Poor Lack Legal Defense*, THE NEW YORK TIMES (Mar. 19, 2016), <https://www.nytimes.com/2016/03/20/us/in-louisiana-the-poor-lack-legal-defense.html>.

can facilitate increased efficiency for lawyers anywhere, then no other area of the law seems more deserving than for the attorneys who represent the indigent.⁶³

B. Public Defender Overload

In 2007, U.S. public defender offices received more than 5.5 million cases, employed little over 15,000 full-time attorneys, and reported operating expenditures of more than \$2.3 billion.⁶⁴ The scale of the burden our justice system asks public defender offices to shoulder is simply overwhelming, especially in light of the understaffed and underfunded nature of many of these public defender offices.⁶⁵ In Florida in 2009, the annual caseload per attorney was over 500 felonies and 2,225 misdemeanors.⁶⁶ According to the US Department of Justice in 2007, about seventy-three percent of county public defender offices exceeded the maximum recommended limit of cases (150 felonies or 400 misdemeanors).⁶⁷ The lack of time, money, and manpower available to them have led some public defender offices to contemplate the drastic option of turning down appointments, seemingly in direct conflict with the purpose and spirit of the *Gideon* decision.⁶⁸ Acutely aware of the virtual impossibility of these overstretched offices to add any more cases, courts have approved public defenders' refusal to represent indigent clients as necessary.⁶⁹ In effect, courts are not forcing public defenders to represent clients because it is patently clear they do not have the means to do so. Certainly, such desperate measures are a byproduct of the limitations inherent to human attorneys, as there is a limit to the time and energy public defender offices can devote. Computer software can play an instrumental role in these areas by alleviating the untenable caseload for public defenders. Harnessing such technology in order to provide general legal services for low-income clients is both a likely development and a much-needed form of relief for public defender offices across the country.

In 2013, the Florida Supreme Court ruled that public defender's offices can apply to turn down future appointments when their caseloads rise so high that they cannot truly "represent" all of their clients.⁷⁰ Florida is not alone in granting such denials. In 2012, Missouri's Supreme Court similarly upheld the ability of public defenders in that state to decline appointments if they were too far over

⁶³ See Alexa Van Brunt, *Poor People Rely on Public Defenders Who are Too Overworked to Defend Them*, THE GUARDIAN (June 17, 2015), <https://www.theguardian.com/commentisfree/2015/jun/17/poor-rely-public-defenders-too-overworked>.

⁶⁴ LYNN LANGTON & DONALD J. FAROLE, JR., U.S. DEP'T OF JUSTICE, BUREAU OF JUSTICE STATISTICS SELECTED FINDINGS: CENSUS OF PUBLIC DEFENDER OFFICES, 2007 1 (2009), <https://www.bjs.gov/content/pub/pdf/pdo07st.pdf>.

⁶⁵ See Clark, *supra* note 50, at 49.

⁶⁶ See LAURENCE A. BENNER, AMERICAN CONSTITUTION SOCIETY, WHEN EXCESSIVE PUBLIC DEFENDER WORKLOADS VIOLATE THE SIXTH AMENDMENT RIGHT TO COUNSEL WITHOUT A SHOWING OF PREJUDICE 2-3 (2011), https://www.acslaw.org/wp-content/uploads/2018/04/bennerib_excessivepd_workloads.pdf.

⁶⁷ See Lynn Langton & Donald J. Farole, Jr., U.S. DEP'T OF JUSTICE, BUREAU OF JUSTICE STATISTICS SPECIAL REPORT: COUNTY-BASED AND LOCAL PUBLIC DEFENDER OFFICES, 2007 1 (2010), <https://www.bjs.gov/content/pub/pdf/clpdo07.pdf>.

⁶⁸ See Robertson, *supra* note 62.

⁶⁹ See Robertson, *supra* note 62.

⁷⁰ See Robertson, *supra* note 62.

capacity.⁷¹ A few months later, most of Missouri's public defender's offices stopped accepting cases for one to two months, according to State Public Defender Michael Barrett.⁷²

Of course, the long-term effect of this scarcity remains to be seen. In the short-term, it is clear that the justice system has failed in a stunning way. Many defendants will continue to go without dedicated legal assistance. When more than eighty percent of those charged with felonies are indigent, more must be done to ensure affordable legal resources are available.⁷³ Public defender offices and legal aid groups are often overwhelmed, especially in rural areas.⁷⁴ In a situation that seems hopeless, perhaps modern technology can step in to provide relief.

C. Robots to the Rescue

For criminal defendants in dire need of legal counsel, finding a public defender that is not juggling dozens of other clients can be nearly impossible.⁷⁵ However, in criminal cases an attorney—overworked or not—is at least available to both sides. For individuals grappling with a civil issue without means to afford an attorney, there is little recourse beyond searching for a willing legal aid group or other scarce low-cost legal counsel.⁷⁶ The prospect of machines being able to bridge the representation gap is a feasible concept. Where human attorneys have failed to meet the demand, machines can be built to step in and supply the masses with the legal services they need, but cannot necessarily afford.⁷⁷ Specifically, by not forcing firms to hire expensive assistants to sort through documents and evaluate tickets, law offices can opt to use an artificially-intelligent machine to do these basic jobs instead.⁷⁸ Firms can then increasingly pass the savings onto clients as technology drives costs down and makes legal services more affordable to greater numbers of people.⁷⁹

Generally speaking, a machine is superior to a human worker in several important areas.⁸⁰ For one, robots do not request compensation for their time. Often, there is only a fee for purchasing usage of the machine. As stated earlier, another advantage machines have over humans is their ability to work around-the-clock.⁸¹ While any form of computer software is prone to the occasional hiccup, professionally designed programs like Luminance and ROSS will usually function

⁷¹ State ex rel. Mo. Pub. Defender Comm'n v. Waters, 370 S.W.3d 592 (Mo. 2012).

⁷² See Peng, *supra* note 61.

⁷³ See Peng, *supra* note 61.

⁷⁴ Robert P. Mosteller, *Failures of the American Adversarial System to Protect the Innocent and Conceptual Advantages in the Inquisitorial Design for Investigative Fairness*, 36 N.C.J. INT'L L. & COM. REG. 319, 326 (2011).

⁷⁵ See Peng, *supra* note 61.

⁷⁶ See Peng, *supra* note 61.

⁷⁷ See O'Toole, *supra* note 38.

⁷⁸ See Ou, *supra* note 27.

⁷⁹ See Palazzolo, *supra* note 11.

⁸⁰ Michael Jones, *Yes, the Robots Will Steal Our Jobs. And That's Fine*, THE WASHINGTON POST (Feb. 17, 2016), https://www.washingtonpost.com/posteverything/wp/2016/02/17/yes-the-robots-will-steal-our-jobs-and-thats-fine/?utm_term=.246bf093344c.

⁸¹ *Id.*

seamlessly for hours straight, no breaks necessary.⁸² Applying their utility to the legal industry could be a panacea for one of its biggest flaws: neglecting its poorest clients. In fact, individuals have already harnessed such technology to benefit those unable to afford an attorney.⁸³ Stanford student Joshua Browder has acted as a pioneer in this area by fulfilling the space-age dread of lawyers everywhere: building a full-fledged robot attorney.⁸⁴

However, cause for alarm may not be warranted at this time. Browder has deployed his online robot selectively so far by aiming to help with evictions and parking tickets.⁸⁵ Browder's robot, named "DoNotPay", is deceptively simple, as it allows users to chat via instant messenger with the bot, which in turn discerns their legal problem by asking a series of personal questions.⁸⁶ After gathering the necessary information about their particular concern, the bot is then able to craft a customized legal document to help resolve the user's issue.⁸⁷ This document might be as innocuous as an application letter to file for government housing, but the prospect of free legal assistance is a godsend for cash-strapped users who might have been otherwise struggling to assemble such documentation on their own. Over 250,000 people have used the service so far, according to Browder's estimate, and those users have successfully overturned around 160,000 parking tickets in London and New York.⁸⁸ For the future, Browder plans to expand the artificially intelligent lawyer to help other vulnerable groups navigate complicated legal systems, including "people who are HIV positive and refugees in foreign countries."⁸⁹

The efficacy of robotic lawyers like Browder's DoNotPay is enhanced by the choice to tailor its service to select problems that are relatively easy to process, so long as the relevant rules are programmable.⁹⁰ The difficulty for non-lawyers to properly assess those rules is a byproduct of

⁸² Rebecca J. Rosen, *In Praise of Short-Term Thinking*, THE ATLANTIC (Sept. 3, 2015), <https://www.theatlantic.com/business/archive/2015/09/jobs-automation-technological-unemployment-history/403576/>. ("Because the thing is, although jobs have continued to proliferate in the long run, these predictions weren't exactly wrong in the short run: Machines do replace humans. In fact, replacing humans is often entirely the point.")

⁸³ O'Toole, *supra* note 38.

⁸⁴ Arezou Rezvani, *'Robot Lawyer' Makes The Case Against Parking Tickets*, NPR (Jan. 16, 2017, 3:24 PM), <http://www.npr.org/2017/01/16/510096767/robot-lawyer-makes-the-case-against-parking-tickets>.

⁸⁵ Karen Turner, *This Robot Lawyer Helps the Newly Evicted File for Housing Aid*, THE WASHINGTON POST (Aug. 9, 2016), <https://www.washingtonpost.com/news/innovations/wp/2016/08/09/legal-robot-helps-newly-evicted-file-for-housing-free-of-charge/>.

⁸⁶ Anthony Cuthbertson, *Robot Lawyer Overturns \$4 Million in Parking Tickets*, NEWSWEEK (June 29, 2016, 6:42 AM), <http://www.newsweek.com/robot-lawyer-chatbot-donotpay-parking-tickets-475751>.

⁸⁷ Will Oremus, *"World's First Robot Lawyer" is a Chatbot That's Actually Useful*, SLATE MAGAZINE (June 29, 2016, 5:42 PM), http://www.slate.com/blogs/future_tense/2016/06/29/a_chatbot_for_parking_tickets_shows_how_bots_can_actually_be_useful.html.

⁸⁸ Cara McGoogan, *19-Year-Old's 'Robot Lawyer' Overturns 160,000 Parking Tickets*, THE TELEGRAPH (June 29, 2016, 10:30 AM), <https://www.telegraph.co.uk/technology/2016/06/29/19-year-olds-robot-lawyer-overturns-160000-parking-tickets/>.

⁸⁹ *Id.*

⁹⁰ See Turner, *supra* note 85.

not having the necessary legal information readily on-hand.⁹¹ Fighting a parking ticket may sound simplistic on the surface, but it entails an understanding of local ordinances and how to contest such infractions using proper procedure.⁹² Having DoNotPay provide the kind of simple, but effective legal help that would be out of reach to those without the necessary funds to pay a lawyer, represents a momentous shift in the accessibility of the law.⁹³ No longer will clients seeking help with simplistic legal issues have to pay the same hourly rate as others who have more complex legal issues.

A lawyer's time may have a set assigned value, but not every client's problem has the same complexity. Charging different rates for different clients may be an option for some firms, but for public defenders the problem is more of a matter of allocating enough time.⁹⁴ Hence, computer programs like DoNotPay can serve as the bridge for those in need of just a few hours of help to understand their legal rights, without having to book an appointment or pay a fee.⁹⁵ For clients who only need momentary guidance in order to assess their claim, legal technology can be liberating. Ultimately, lawyers should view the introduction of these computer programs as beneficial for all parties, rather than an intrusion into their field.

III. ATTORNEY 2.0

The prospect that robots like ROSS, Luminance, and DoNotPay can assume some typical responsibilities of lawyers is no longer a dream, but a reality that edges closer to existence every day.⁹⁶ The legal profession will undoubtedly be altered by the increasing prevalence of these robots and their descendants. Nevertheless, whether these robots will serve as threats to a lawyer's usefulness or enhance their capabilities remains to be seen. By the same token, the anxieties of law students worried about a diminished job market awaiting them may be well-founded in some respects. Lawyering could potentially emulate the trend of manufacturing, with robots becoming the preferred option over their error-prone human counterparts.⁹⁷ In fact, the legal profession could undergo a shift akin to what the tax industry experienced. The Internal Revenue Service's shift to an automated computer review system has distinctly reduced the need for humans, who only need to show up in the event of an audit, which happens in less than one percent of cases.⁹⁸

⁹¹ See Turner, *supra* note 85.

⁹² See Cuthbertson, *supra* note 86.

⁹³ See Cuthbertson, *supra* note 86.

⁹⁴ See Peng, *supra* note 61.

⁹⁵ See Rosen, *supra* note 82.

⁹⁶ Ou, *supra* note 27.

⁹⁷ David M. Ewalt, *Manufacturing Jobs Aren't Coming Back, And That's OK*, FORBES (Nov. 8, 2011, 2:20 PM), <http://www.forbes.com/sites/davidewalt/2011/11/08/manufacturing-jobs-arent-coming-back-and-thats-ok/#3f385d2d5661>.

⁹⁸ INTERNAL REVENUE SERVICE, ENFORCEMENT: EXAMINATIONS (Jan. 30, 2019), <https://www.irs.gov/statistics/enforcement-examinations>.

A. *The Need to Adapt*

The fondness for a personalized approach to legal advice is unlikely to ever go away. Still, the advantages held by computers, like being able to more accurately process data in an expedient fashion,⁹⁹ are undeniable and appeal to firms and clients alike. The success of DoNotPay heralds a future where similar programs could be designed to assist with other, non-creative legal tasks. Robot lawyers programmed to handle a variety of legal problems could start sprouting up in the wake of DoNotPay. Recent developments in artificial intelligence have spawned a computer program that can help draft confidentiality agreements and wills.¹⁰⁰ With such basic legal needs gradually being addressed through computers, the necessity of hiring an attorney for these simple legal services is becoming diminished.¹⁰¹ For clients eager to avoid legal fees, pricey human attorneys could find themselves sidelined in favor of affordable, automated legal advice. While human lawyers will continue to be needed for the immediate future when it comes to complex legal matters, the notion that robots can provide adequate legal services signals an emerging competition between man and machine.

In his book *Tomorrow's Lawyers*, author Richard Susskind describes how technology will bring about a seismic shift in which personalized legal counseling will give way to a more standardized process that can be widely delivered.¹⁰² Just as DoNotPay can provide a form of standardized legal assistance with parking tickets, Susskind envisions such templates becoming the norm as clients seek more efficient legal help.¹⁰³ Susskind imagines such standardized products will counsel clients without too much hands-on supervision, allowing lawyers additional time to focus on the atypical aspects of a transaction.¹⁰⁴ This revamped process benefits clients as well, who innately seek to maximize their interactions with lawyers in a way that increases their yield for every dollar spent. Rather than depicting a dystopian future for lawyers, Susskind's principal aim in *Tomorrow's Lawyers* is to outline the enormous opportunity he sees for those in the profession willing to adapt and embrace the changes ahead.¹⁰⁵

Susskind describes how lucrative possibilities are awaiting those savvy enough to develop cost-effective ways to utilize advanced technology in the legal profession.¹⁰⁶ In Susskind's view, the lawyers who embrace this realignment of the legal profession will succeed and avoid any recriminations by an emerging technological ascendancy.¹⁰⁷ *Tomorrow's Lawyers* advocates that lawyers seeking to remain relevant and competitive must adapt to technological advancements.¹⁰⁸

⁹⁹ See Cohn, *supra* note 19.

¹⁰⁰ Dan Bindman, *AI App That Replaces Lawyers "Could Be Used in Divorce Cases"*, LEGAL FUTURES (Nov. 22, 2016), <http://www.legalfutures.co.uk/latest-news/ai-app-replaces-lawyers-used-divorce-cases>.

¹⁰¹ See Ou, *supra* note 27.

¹⁰² See RICHARD E. SUSSKIND, *TOMORROW'S LAWYERS: AN INTRODUCTION TO YOUR FUTURE* 128 (2013).

¹⁰³ See *id.* at 103.

¹⁰⁴ See *id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

Significantly, for up-and-coming attorneys, Susskind suggests that their law degree may be better served by deviating from the traditional mode of lawyering by incorporating standardized, computer-based legal services into their own practice.¹⁰⁹ Thus, by developing their technological acumen, burgeoning lawyers can offer their clients well-tuned commercial awareness and service-oriented skills.¹¹⁰

B. *Standing Out in a Tech-Driven Economy*

Given the likelihood that many experienced lawyers will express suspicion towards untried technological trends, lawyers seeking to bolster their technological credentials should not count on immediate acclamation or support.¹¹¹ But encountering skepticism should not be a deterrent. As Susskind points out, the emergence of the Internet was not immediately heralded as a game-changer for the legal profession.¹¹² Lawyers content with remaining stagnant in their high-tech capabilities are risking obsolescence. However, a changing technical landscape does not necessarily portend a dire outcome for lawyers. As Susskind notes, “When one door closes, another door opens; but we often look so long and so regretfully upon the closed door that we do not see the ones which open for us.”¹¹³

The pressure to adapt to technological advances will alter a lawyer’s typical role in society. Instead of providing just legal services, lawyers will likely market themselves as multidimensional practitioners.¹¹⁴ So long as software and computers remain a flourishing part of the legal profession, attorneys may shift away from standard bookkeeping and document creation. Instead, with computers handling such tasks, lawyers may be entrusted with overseeing the organization of computer-generated legal information.¹¹⁵ Attorneys will almost certainly be retained in order to assist the design of legal technology systems, as computer companies will no doubt want the input of attorneys on how to best analyze legal information. Lawyers can preserve their edge by expanding their expertise beyond pure legal work. As other industries grow, lawyers will remain in demand as interdisciplinary consultants that can interpret legal information for associated professions like health care providers.¹¹⁶ By becoming more sophisticated in their technological prowess, lawyers can serve a more diverse set of clients.

¹⁰⁹ *Id.* at xiii.

¹¹⁰ *See id.*

¹¹¹ *See* William D. Henderson, *Letting Go of Old Ideas*, 112 MICH. L. REV. 1111, 1126-27 (2014) (reviewing STEVEN J. HARPER, *THE LAWYER BUBBLE: A PROFESSION IN CRISIS* (2013) and RICHARD SUSSKIND, *TOMORROW’S LAWYERS: AN INTRODUCTION TO YOUR FUTURE* (2013)), <http://repository.law.umich.edu/mlr/vol112/iss6/13>.

¹¹² *See* SUSSKIND, *supra* note 102, at xvi.

¹¹³ *See* SUSSKIND, *supra* note 102, at x.

¹¹⁴ *See e.g.*, Roland Vogl, *The Coming of Age of Legal Technology*, STAN. L. SCH. BLOG (Sept. 26, 2016), <https://law.stanford.edu/2016/09/26/184188/>.

¹¹⁵ *See id.*

¹¹⁶ Tanina Rostain, *The Emergence of “Law Consultants”*, 75 FORDHAM L. REV. 1397, 1398-99 (2006), <http://ir.lawnet.fordham.edu/flr/vol75/iss3/12>.

Lawyers need not fear that innovations like Luminance, ROSS, and DoNotPay will deprive them of their livelihood entirely.¹¹⁷ Technology will inexorably advance as the demand grows for savvy, cost-effective legal services.¹¹⁸ In response, attorneys will have to recognize that their profession is experiencing a transformation brought about by technology. Lawyers more familiar with technological advances are better suited to thrive in this highly augmented legal profession. As lawyers will likely be working with technology more frequently, being able to decide which legal program is most appropriate and assess the results of its operation will be essential.

As technology's influence on the profession becomes more widespread, complementary skills, the client-centered talents that computers cannot provide, will be greatly sought after. With firms and companies opting to use machines for legal grunt work, the emotional intelligence of lawyers will be vital to building relationships with clients. The ideal lawyer of tomorrow will have a skill-set capable of demonstrating their value to a client. Lawyers ready for this future should be capable of interacting with computer programs while still able to communicate effectively during face-to-face client meetings.

Notably, this dexterity requires a lawyer to obtain a certain comfort level with modern technology, as a client's problems may not only be solvable through technology but arise from it as well. While computers and other machines can provide solutions, they can also trigger legal, financial, and emotional problems for clients, for which clients will seek assistance. Thus, being able to properly diagnosis a client's legal problem will require a lawyer to have insight as to what technologies are present in the client's life.¹¹⁹

Competency with consumer technology will be necessary to communicate with a client whose problem may be intertwined with the internet or other digital platforms. Without such competency lawyers will struggle not only to remain valuable to firms and businesses, but also to effectively work with clients. Even the most creative lawyer will labor to generate solutions to a problem laden with mystifying technological concepts without technological competence.

C. Competency and Checking Your Email

Understanding the potential of these innovations will be the key step for attorneys seeking to maintain their competitiveness in a crowded legal industry.¹²⁰ High-tech developments will likely affect the kinds of jobs attorneys will be tasked with. However, while a lawyer's responsibilities may be altered by the prominence of computers, the profession's primary role as a client's problem-solver is unlikely to change. For this reason, being able to maintain a constructive relationship with clients will depend on understanding the problems they encounter. A lawyer's

¹¹⁷ See Marr, *supra* note 5 (Stating that advances in technology will change jobs. Also stating that one estimate says that up to 47 percent of jobs are at risk).

¹¹⁸ Mosteller, *supra* note 74.

¹¹⁹ Stefan H. Krieger & Richard K. Neumann, Jr., *ESSENTIAL LAWYERING SKILLS* 68 (4th ed. 2011).

¹²⁰ Stephen Mihm, *America's Chronic Surplus of Lawyers*, BLOOMBERG (Dec. 21, 2014, 9:41 PM), <https://www.bloomberg.com/view/articles/2014-12-22/americas-chronic-surplus-of-lawyers>.

ability to identify their client's problems will rely on a willingness to understand widespread technology. A lawyer can have an encyclopedic understanding of case law, but if they lack the ability to check a website or understand how text messaging works, then they are not competent to represent clients in this modern age. Thus, remaining ignorant of technological advances and the legal repercussions of such innovations would be a dereliction of a lawyer's duty to their client.

Clients will seek out the lawyers and firms with the best tools and technology at their disposal.¹²¹ Society's growing dependence on computers and internet devices will inexorably produce legal issues that clients will rely on attorneys to resolve. New technological advancements have already generated a host of novel legal issues.¹²² Consumers are often unaware of the traps they can set for themselves through seemingly mundane actions like taking photos, buying music, or communicating with others.¹²³ The potential for these innocuous habits to devolve into legal nightmares is an unfortunate reality of modern high-tech advances that are brimming with unexpected capabilities.¹²⁴ For the sake of their clients, as well as their own professional standing, lawyers must be mindful of opportunities to improve their technological expertise. To act otherwise would be a myopic misstep and, potentially, a violation of a lawyer's code of conduct. According to Comment 6 to Rule 1.1 of the ABA Model Rules of Professional Conduct,

To maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice, including the benefits and risks associated with relevant technology, engage in continuing study and education and comply with all continuing legal education requirements to which the lawyer is subject.¹²⁵

In short, the ABA is recommending that lawyers be more conscious of their technological acumen.

For lawyers wary of having to take time to become a computer expert, this update to the Model Rules is not a draconian mandate. Lawyers need not fear being tested on their technological

¹²¹ Kimball Perry, *Technology 'Brings Lawyer and Client Closer'*, USA TODAY (June 3, 2013, 11:13 AM), <http://www.usatoday.com/story/tech/2013/06/03/technology-brings-lawyer-and-client-closer/2384255/>.

¹²² Cara McCoy, *New Technologies Create New Legal Issues*, LAS VEGAS SUN (Apr. 29, 2010, 7:36 PM), <https://lasvegassun.com/news/2010/apr/29/new-technologies-create-new-legal-issues/> (discussing how Nevada's judicial system is struggling to address the rise of "cyberbullying", where victims are harassed via the internet and the abuse of "sexting", where suggestive, revealing or explicitly nude photos, are shared through phone messages); See also Ellen Nakashima, *FBI Paid Professional Hackers One-Time Fee to Crack San Bernardino iPhone*, THE WASHINGTON POST (Apr. 12, 2016), https://www.washingtonpost.com/world/national-security/fbi-paid-professional-hackers-one-time-fee-to-crack-san-bernardino-iphone/2016/04/12/5397814a-00de-11e6-9d36-33d198ea26c5_story.html?utm_term=.b2ef0bbdd4cb (Highlighting the prominent battle over whether the FBI could compel a phone manufacturer to provide a security workaround in order to access suspected terrorist's cell phone).

¹²³ John C. Dvorak, *How iPhone Cameras Changed Society*, PCMag (Sept. 21, 2016, 8:00 AM), <http://www.pcmag.com/commentary/348047/how-iphone-cameras-changed-society>.

¹²⁴ See McCoy, *supra* note 122.

¹²⁵ AM. BAR ASS'N, COMMISSION ON ETHICS 20/20: REPORT TO THE HOUSE OF DELEGATES 3 (2012), http://lawyerist.com/lawyerist/wp-content/uploads/2015/02/2012_hod_annual_meeting_105a_filed_may_2012.pdf.

pro prowess or having to become a IT-certified, as with other professions¹²⁶ The ABA Commission on Ethics 20/20 explained:

The proposed amendment, which appears in a Comment, does not impose any new obligations on lawyers. Rather, the amendment is intended to serve as a reminder to lawyers that they should remain aware of technology, including the benefits and risks associated with it, as part of a lawyer's general ethical duty to remain competent.¹²⁷

The ABA has recognized that lawyers will need to expand their competencies to encompass more than just legal knowledge, skill, and preparation. Legal competence also includes technological competence. In reality, this suggestion does not amount to a higher bar for lawyers to meet. Remaining competent has always involved being able to understand the nature of a client's problem and possess the necessary knowledge to be able to address it.

The ABA's expansion of what it means to be competent is merely codifying what many lawyers already grasp in regard to technology. On the whole, attorneys must possess general technological competence in order to meet their ethical obligation as legal practitioners.¹²⁸ This responsibility does not arise simply because the rules have changed, but because the world has changed. A lawyer must attain a suitable level of technological competence before representing a client. Competence under this new standard has more to do with the tools a lawyer uses than the substance of their legal arguments and strategies.¹²⁹

The ABA's Comment reflects the world we live in, where websites, cellphones, and the internet play integral roles in many cases. This should be heartening for lawyers already imbued with legal acumen, as becoming technologically competent can be a relatively simple task when compared with learning new concepts in law school and tackling complex litigation.¹³⁰ While the concepts may be simple, identifying the areas where a lawyer should improve may prove to be the most challenging.

For lawyers seeking to preserve their technological competence, they must consider every avenue of their approach to technology. First, attorneys must utilize their existing technology in order to communicate securely with their clients. Email may be efficient and useful, but its utility is negated if a lawyer allows his account to be compromised.¹³¹ Second, practical skills like being able to write a contract in Microsoft Word and knowing how to properly edit or redact a PDF are

¹²⁶ Rob Watts, *The 10 Highest-Paying IT Certifications of 2018*, PC MAGAZINE (Apr. 23, 2018, 7:00 AM), <http://www.pcmag.com/article/345434/the-7-highest-paying-it-certifications>.

¹²⁷ AM. BAR ASS'N, *supra* note 125.

¹²⁸ AM. BAR ASS'N, *supra* note 125.

¹²⁹ Jane Croft, *Lawyers Must Learn to Embrace Technology*, FINANCIAL TIMES, (Nov. 20, 2016) <https://www.ft.com/content/aa77a9ec-9ace-11e6-8f9b-70e3cabccfae>

¹³⁰ *Id.*

¹³¹ Sam Glover, *Lawyers Need a Secure Communication Portal, and Here's How it Should Work*, LAWYERIST.COM (Aug. 11, 2015), <https://lawyerist.com/mycase-secure-communication-portal/> (discussing ways to secure lawyer – client communication).

fundamental capabilities that most modern law firms would presume even a fledgling attorney to possess.¹³² Finally, an attorney must make crucial decisions regarding how they will store their client's information in a secure fashion, whether it is on a computer, a network, or on the cloud.¹³³ Similarly, developing secure passwords and communication methods are essential steps in diagnosing and strategizing a client's claim. Even the best-laid plans of attorneys and clients are pointless if they remain vulnerable to exposure and exploitation.

Regardless of the method a lawyer chooses, obtaining a technical understanding of how to employ the appropriate storage location for their client's information is essential. Understanding how to write an email or redact a PDF file is no longer just a quirk of the IT-crowd, they are essential skills of anyone hoping to navigate an economy dependent on such technology. A lawyer may jeopardize his or her reputation by neglecting to advance their technological understanding. Luddite lawyers will need to come around eventually as eschewing technological trends is no longer an option. Pretending otherwise also flies in the face of basic legal principles of adapting to new precedent. The legal profession has always responded to drastic changes in the law shrewdly, as attorneys adapt to develop new strategies to protect their clients.¹³⁴

Gone are the days where a lawyer could skate by with only a superficial understanding of technology. While computers have accelerated a lawyer's ability to communicate with clients, there are a number of drawbacks to contend with as well. For instance, attorneys may overlook the necessity of using secure passwords for their digital accounts.¹³⁵ Even a minor security breach of an email account could expose a client's confidential information to outside parties.¹³⁶ For attorneys forced to admit these lapses, a client's trust in their ability to manage their case would be significantly eroded. A lawyer's legal knowledge amounts to little for a client when the lawyer is unable to safeguard sensitive information.

With computers serving an integral role in nearly every profession, fastidious clients will find it unacceptable for a lawyer to be ignorant of basic digital security. A lawyer unable to recognize

¹³² *Id.*

¹³³ J. D. Biersdorfer, *Take Extra Steps to Keep Your Personal Information Secure*, THE NEW YORK TIMES (Sept. 23, 2016), <https://www.nytimes.com/2016/09/24/technology/personaltech/take-extra-steps-to-keep-your-personal-information-secure.html> (discussing two-step verifications for personal information stored online); See also Joe Kelly, *Protect Your Law Firm from Ransomware Attacks*, ATTORNEY AT WORK (May 11, 2016), <https://www.attorneyatwork.com/protect-law-firm-ransomware-attacks/> (discussing the recent trend of criminals using malevolent computer programs to access a law firms files and extort the firm into paying a ransom in exchange for not having the files publicly released. Undoubtedly, such a trend represents an extreme, but all-too-real threat of the digital age awaiting unsuspecting law firms).

¹³⁴ Stephen J. Curley, *Adapt or Die*, GPSOLO, (Apr. 5, 2019),

https://www.americanbar.org/groups/gpsolo/publications/gp_solo/2012/september_october/adapt_or_die/.

¹³⁵ Dan Goodin, *Anatomy of a Hack: How Crackers Ransack Passwords Like "qeadzcvrswf1331"*, ARS TECHNICA (May 27, 2013, 9:00 PM), <https://arstechnica.com/security/2013/05/how-crackers-make-minced-meat-out-of-your-passwords/>.

¹³⁶ *Id.*

this prospect has little value in a crowded legal market.¹³⁷ Generally speaking, these technological blunders do not merely harm a lawyer's chance with current clients, but also damages their prospects of retaining future clients.¹³⁸ An inability to soundly use technology may be interpreted as a sign of carelessness or apathy—traits unfavorable to have in a lawyer. It may soon become a realistic possibility for lawyers to face malpractice charges for technological ignorance, like failing to back up their devices properly or for neglecting to encrypt all devices containing client information.¹³⁹ Such avoidable missteps are costly mistakes that can damage a client's case and, in some cases, do permanent damage to an attorney's reputation.

In a 2012 decision, the Supreme Court of South Carolina suspended a local attorney's license to practice law after she refused to "maintain and monitor an operational email account,"¹⁴⁰ in direct opposition to a court order mandating her to do so. The lawyer did not originally own an email account, but the court reminded her that under South Carolina Appellate Court Rules, she was required to have one.¹⁴¹ In response, the lawyer set up an account, but left it inactive and had an auto-response indicating she would not reply to any correspondence through the account.¹⁴² Faced with this defiant gesture, the Supreme Court of South Carolina found the attorney's actions amounted to a "substantial threat of serious harm to the public and to the administration of justice" and suspended her license accordingly.¹⁴³ The court in that case signaled how a lawyer can violate their professional duty by not utilizing technology properly. The court's holding may appear extreme in this instance but maintaining lines of communication for a client is a vital service lawyers must provide. For this exact reason, legal technology like ROSS and DoNotPay appeal to lawyers and clients alike because their perpetual availability is particularly valuable. Anxious clients need not worry about getting ahold of their computer programs, as is the case with a busy lawyer. Accordingly, attorneys ought to bear in mind the role their profession has played in fueling this rise of machines.

D. Embracing the Robotic Revolution

¹³⁷ Steven J. Harper, *Too Many Law Students, Too Few Legal Jobs*, THE NEW YORK TIMES (Aug. 25, 2015), <https://www.nytimes.com/2015/08/25/opinion/too-many-law-students-too-few-legal-jobs.html>.

¹³⁸ Curley, *supra* note 134.

¹³⁹ See generally David G. Ries, *ABA Tech Report 2017: 2017 Security* (Dec. 1, 2017), https://www.americanbar.org/groups/law_practice/publications/techreport/2017/security/.

¹⁴⁰ *In re Collie*, 749 S.E.2d 522, 525 (S.C. 2013), <http://www.judicial.state.sc.us/courtOrders/displayOrder.cfm?orderNo=2013-10-17-01>; See also William Peacock, *Retired Attorney Suspended For Refusing to Maintain Email Address*, STRATEGIST (Oct. 23, 2013, 12:58 PM), <http://blogs.findlaw.com/strategist/2013/10/retired-attorney-suspended-for-refusing-to-maintain-email-address.html> (Naturally, this case is quite an extreme example of a court sanctioning an attorney for not having basic digital tools, and it should be noted that the attorney in question was retired and had not had any clients in thirty years, but was still admitted to the bar, thus the rule requiring her to have an email account technically still applied to her, despite her apparent lack of internet access. Either way, this case demonstrates the burden courts place on attorneys to maintain digital forms of contact, so as to facilitate multiple ways for clients to reach them.).

¹⁴¹ *In re Collie*, 749 S.E.2d at 523.

¹⁴² *Id.*

¹⁴³ *Id.* at 525.

If the ABA's new regulations are any indication, lawyers can no longer be content with remaining ignorant to technological advancements. Law firms and clients now have realistic technological options for legal services beyond just hiring a lawyer. This prospect is not going to improve for lawyers either. Competition from the tech-sector will continue to grow. Computer software will only get better through upgrades and artificial intelligence will similarly make leaps in capability over time. Computer owners are aware of the upsides that come with installing the upgrades that tech companies roll out—new features, better performance, etc.¹⁴⁴ However, just as robots like ROSS, Luminance, and DoNotPay are hampered by their initial design flaws, the flaws of these programs can also be fixed, and their capabilities expanded.¹⁴⁵

More traditional clients may prefer human counterparts for familiarity alone. Yet a computerized legal service may become too appealing to ignore. For clients who put a premium on being kept apprised, for instance, digitalized legal services can provide the kind of immediate feedback that is hard for humans to match.¹⁴⁶ Furthermore, lawyers who employ an archaic website or lack basic email etiquette offer little incentive for shrewd clients. A lawyer's deficiencies in these areas becomes ruinous when a client's problem rests on their advocate's knowledge of modern technology to be resolved.¹⁴⁷

Lawyers should take heed of the folk hero John Henry, whose skill as a steel-driving laborer was measured in a tunnel-building race against a steam-powered hammer.¹⁴⁸ According to the legend, John Henry was able to overcome the odds and beat his mechanized opponent but perished after crossing the finish line.¹⁴⁹ Lawyers should strive to emulate John Henry's determination in the face of a formidable challenge posed by a machine.¹⁵⁰ John Henry remains a revered folk hero because he represents the indomitable will latent in all of us. With the right mindset, even the most technologically challenged lawyers can stay competitive and assist their clients with high-tech challenges. However, instead of beating the machines like Henry did, lawyers should seek to defeat the machines by co-opting them. By recognizing the potential in wielding legal technology for their own means, lawyers can enhance their standing and better serve their clients.

IV. DIGITALLY IMMORTAL

One of the more bedeviling issues presented by our digitalized world is in regard to property. Deciding who owns what is no longer a simplistic assessment of ownership rights. Just because a

¹⁴⁴ See e.g., Robert Merkel, *Here's The Reason Your Old Devices Feel So Slow And Make You Want to Upgrade*, SCIENCE ALERT (Oct. 23, 2017), <https://www.sciencealert.com/why-old-computers-smartphones-feel-slow-time-upgrade-planned-obsolence>.

¹⁴⁵ See Ou, *supra* note 27.

¹⁴⁶ See e.g., Oremus *supra* note 87.

¹⁴⁷ See e.g., McCoy, *supra* note 122.

¹⁴⁸ William Grimes, *Taking Swings at a Myth, With John Henry the Man*, THE NEW YORK TIMES (Oct. 18, 2006), <https://www.nytimes.com/2006/10/18/books/18grim.html>.

¹⁴⁹ *Id.*

¹⁵⁰ *Id.*

client lawfully owns their computer does not mean they own everything on it.¹⁵¹ This seemingly baffling concept can present quite the wrinkle for lawyers handling estate planning or divorce proceedings. A lawyer involved in such matters has to figure out who owns the photos, music, or movies on a computer—one that may be a shared computer with no clear indication of its primary user.¹⁵²

As an illustration, imagine a divorce proceeding where a couple wants to divvy up their property evenly, including the files on their shared computer. However, while the computer was bought by the husband, the music and movies on the computer were purchased via a credit card in the wife's name. Furthermore, the photos and videos taken by the couple during their marriage, via a camera bought by the husband, are stored on a cloud-based storage service, (meaning the files are not stored on the physical hard drive of the computer, but across multiple servers) also in the wife's name.

A. *Digital Wills and Bruce Willis*

Even tech-savvy lawyers may struggle to disentangle digital asset issues. Thus, a relatively simple dispute over property can quickly become a complex disagreement encompassing intellectual property law and thorny issues over who actually owns such intangible digital media. Such issues become even more convoluted when the possibility for responsive mediation is unlikely, particularly in lengthy probate disputes.¹⁵³ Such complexities will become more frequent as digital assets become essential facets of modern-day property. Lawyers ought to start the arduous process of researching and educating oneself regarding these high-tech dilemmas sooner rather than later. Clients can take comfort in knowing their lawyer does not need to play catch-up in order to protect their hard-earned digital assets.

Typically, a collector who assembles thousands of books or albums could bequeath them to descendants, but legal experts say passing on iTunes (a media player owned by Apple) and Kindle (Amazon's digital book service) libraries would be much more complicated.¹⁵⁴ Significantly, one's heirs stand to lose huge sums of money.¹⁵⁵ "I find it hard to imagine a situation where a family would be OK with losing a collection of 10,000 books and songs," says Evan Carroll, co-author of

¹⁵¹ Ann W. Coventry & Karin Prangle, NAT'L CAPITAL GIFT PLANNING COUNCIL, PLANNING FOR AN ELECTRONIC AGE: WHAT ARE DIGITAL ASSETS? HOW ARE THEY IDENTIFIED? VALUED? DISTRIBUTED? HOW DO FIDUCIARIES GAIN ACCESS? 2 (2015), http://nccgpc.org/documents/n/national-capital-gift-planning-council/downloads/jan15_coventry_outline.pdf.

¹⁵² See e.g., Ivan Moreno, *Digital wills, or: Who inherits selfies?*, TIMES UNION (Oct. 2, 2016, 10:11 PM), <http://www.timesunion.com/business/article/Digital-wills-or-Who-inherits-selfies-9547088.php>.

¹⁵³ See *id.*

¹⁵⁴ Ariel Bogle, *Who Owns Your iTunes Library After Death?*, SLATE (Aug. 22, 2014, 3:07 PM), http://www.slate.com/blogs/future_tense/2014/08/22/digital_assets_and_death_who_owns_music_video_e_books_after_you_die.html.

¹⁵⁵ *Id.*

‘Your Digital Afterlife.’”¹⁵⁶ According to Carroll, “Legally dividing one account among several heirs would also be extremely difficult.”¹⁵⁷ Usually, the law affords a person complete ownership of an item upon purchase,¹⁵⁸ however, this concept becomes murkier when applied to digital content since the rules regarding them are more restrictive.¹⁵⁹ In particular, pictures on social media pages, emails to friends, or even financial records stored in online cloud storage accounts are restricted by companies that limit such collections’ ability to be conveyed, either by devise or descent.¹⁶⁰

Part of the problem is that with digital content, one doesn’t have the same rights as with print books and CDs. Customers own a license to use the digital files, but they do not actually own the files.¹⁶¹ Apple and Amazon, the two online retail giants of digital media, grant “non-transferable” rights to use content.¹⁶² Essentially, what this means for American consumers who spend millions each year¹⁶³ to buy digitally-formatted music is that they are prevented from passing on these products to their heirs.¹⁶⁴ According to Amazon’s terms of use, “You do not acquire any ownership rights in the software or music content.”¹⁶⁵ Likewise, Apple limits the use of digital files to Apple devices used by the account holder.¹⁶⁶ In essence, consumers who buy music from digital platforms like Amazon and Apple are really just leasing the content. Purchases done on those sites are not for physical copies, although consumers may be paying prices comparable to that of a CD or vinyl record. While the price may be comparable, the property rights for a digital copy are drastically more limited.¹⁶⁷ Such companies are usually selling a license to use the song or film, not the item itself.¹⁶⁸ Where the music is downloaded onto a device you can leave that device to someone, but you cannot leave instructions to share the holdings in your iTunes account after you are gone.¹⁶⁹

¹⁵⁶ Quentin Fottrell, *Who Inherits Your iTunes Library?*, MARKET WATCH (Aug. 23, 2012, 4:56 PM), <http://www.marketwatch.com/story/who-inherits-your-itunes-library-2012-08-23>.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*

¹⁶⁰ See Coventry & Prangley, *supra* note 151.

¹⁶¹ EVAN CARROLL AND JOHN ROMANO, YOUR DIGITAL AFTERLIFE: WHEN FACEBOOK, FLICKR AND TWITTER ARE YOUR ESTATE, WHAT’S YOUR LEGACY? 40 (2011).

¹⁶² Bogle, *supra* note 154.

¹⁶³ Sarah Perez, *Nielsen: Music Streams Doubled In 2015, Digital Sales Continue To Fall*, TECH CRUNCH (Jan. 7, 2016), <https://techcrunch.com/2016/01/07/nielsen-music-streams-doubled-in-2015-digital-sales-continue-to-fall/>.

¹⁶⁴ See Fottrell, *supra* note 156.

¹⁶⁵ AMAZON MUSIC TERMS OF USE, <https://www.amazon.com/gp/help/customer/display.html?nodeId=201380010> (last visited Mar. 27, 2018).

¹⁶⁶ APPLE MEDIA SERVICES TERMS AND CONDITIONS, <http://www.apple.com/legal/internet-services/itunes/us/terms.html> (last visited Mar. 27, 2018).

¹⁶⁷ David Lazarus, *When You Buy Digital Content on Amazon or iTunes, You Don’t Exactly Own It*, LOS ANGELES TIMES (May 13, 2016, 3:00 AM), <https://www.latimes.com/business/lazarus/la-fi-lazarus-digital-content-20160513-snap-story.html>.

¹⁶⁸ Laura McCarthy, *Digital Assets and Intestacy*, 21 B.U.J. Sci. & Tech. L. 384, 397 (2015), https://www.bu.edu/jostl/files/2015/12/McCARTHY_NOTE_FINAL-web.pdf.

¹⁶⁹ Andrew Chow, *Can You Include iTunes, eBooks in Your Will?*, FINDLAW BLOG (Aug. 29, 2012, 5:53 AM), http://blogs.findlaw.com/law_and_life/2012/08/can-you-include-itunes-ebooks-in-your-will.html.

Consumers who discover such restrictions are understandably annoyed about their property rights being limited in such a fundamental way. In 2002, stories surfaced in the media that actor Bruce Willis was going to sue Apple over his right to leave his catalogue of iTunes music to his children.¹⁷⁰ This story was later found to be merely a rumor, after Willis' wife denied that there was any such lawsuit being pursued.¹⁷¹ Nevertheless, these rumors inspired a host of articles that discussed the implications of this new-age "Bruce Willis Dilemma."¹⁷² With this in mind, the proliferation of such academic and legal debates are essential in anticipating where this technology and property trend is heading, especially as more companies and online retailers follow in the footsteps of Apple and Amazon in limiting the allocation of digital assets.¹⁷³

B. *Brave New World for Lawyers*

While Apple and Amazon may have clear terms regarding how digital content purchased through them can be transferred, they are certainly not alone in following such a practice. Publishers of books, music, and movies have always wanted a world in which consumers of these media must pay again and again for the privilege.¹⁷⁴ With billions of dollars of revenue to protect, the entertainment industry has forged numerous restrictions on digital assets that represent concrete threats to a consumer's investments.¹⁷⁵ These investments often amount to cherished movies or albums that families will be barred from accessing after the account holder perishes.¹⁷⁶ Naturally, this may spur disenchanted heirs to seek legal action. Lawyers should recognize that this problem will become a contentious aspect of estate planning and the probate process for years to come.¹⁷⁷

Additionally, as digital content becomes the norm, the entertainment industry has structured these transactions such that the law serves as little hindrance. "The law is light years away from catching up with the types of assets we have in the 21st Century," says Deirdre R. Wheatley-Liss,

¹⁷⁰ Ben Child, *Bruce Willis to Fight Apple Over Right to Leave iTunes Library in Will*, THE GUARDIAN (Sept. 3, 2012, 4:48 AM), <https://www.theguardian.com/film/2012/sep/03/bruce-willis-apple-itunes-library>.

¹⁷¹ Charles Arthur, *No, Bruce Willis Isn't Suing Apple Over iTunes*, THE GUARDIAN (Sept. 3, 2012, 5:29 PM), <https://www.theguardian.com/technology/blog/2012/sep/03/no-apple-bruce-willis>.

¹⁷² Dan Gillmor, *The Bruce Willis Dilemma? In the Digital Era, We Own Nothing*, THE GUARDIAN (Sept. 3, 2012, 3:58 PM), <https://www.theguardian.com/commentisfree/2012/sep/03/bruce-willis-dilemma-digital-era-own-nothing>; See also Michele Bowman, *Dear Bruce Willis: Here's How To Leave Your iTunes Collection To Your Kids*, BUSINESS INSIDER, (Sept. 13, 2012), <https://www.businessinsider.com/how-to-leave-your-itunes-to-your-kids-2012-9>

¹⁷³ Claudine Wong, *Can Bruce Willis Leave His iTunes Collection to His Children?: Inheritability of Digital Media in the Face of EULAs*, 29 SANTA CLARA COMPUTER & HIGH TECH. L.J. 703, 728-32 (2012), <http://digitalcommons.law.scu.edu/chtj/vol29/iss4/5>.

¹⁷⁴ Jamie B. Hopkins, *Afterlife in the Cloud: Managing a Digital Estate*, 5 HASTINGS SCI. & TECH. L.J. 209 (2013), <https://ssrn.com/abstract=2248008>.

¹⁷⁵ Christopher A. H. Vollmer & Deborah Bothun, *2016 Entertainment & Media Industry Trends*, STRATEGY& (2016).

¹⁷⁶ See CARROLL & ROMANO, *supra* note 161.

¹⁷⁷ CARROLL & ROMANO, *supra* note 161.

an estate-planning attorney at Fein, Such, Kahn & Shepard in Parsippany, NJ.¹⁷⁸ Clearly, the entertainment industry is leaning towards implementing a model for all media in which consumers purchase the right to watch or listen or read, but the rights are limited in time and by device.¹⁷⁹ For anxious consumers, there is little certainty over which specific digital assets are subject to restrictions. This ambiguity is exacerbated by lack of clarity in the user agreements to which companies subject their customers.¹⁸⁰ As a result, these agreements complicate the ability of individuals to pass their digital assets on to family. In fact, the majority of these agreements do not address the death of the original purchaser.¹⁸¹ Thus, the question of how these estates can be transferred to descendants—if at all—is left unanswered.

Lawyers tasked with untangling the ownership rights of digital assets may struggle to find reasonable solutions for their clients.¹⁸² However, computer-savvy attorneys are capable of formulating practical solutions to digital restrictions. Lawyers can try to provide amenable ways to pass on the digital assets of their clients without resorting to more time-consuming workarounds. For instance, clients concerned about having their digital assets become inaccessible post-mortem can be advised to simply share their passwords and other account details with their family.¹⁸³ On the opposite end of the spectrum, a lawyer could propose to set up a legal entity, such as a trust, that could buy the digital assets, and then put that entity under the control of the heirs.¹⁸⁴ However, given the difficulty and cost of undertaking such a course of action, a client would likely balk at the prospect of creating a trust. Furthermore, creating a legal entity for this purpose would undermine the entertainment industry's goal of promoting repeated purchases of digital media.¹⁸⁵ The entertainment industry would likely view efforts to establish any digital assets trust negatively. In response, companies could merely opt to change their license terms so as to explicitly prohibit the use of trusts to pass on digital media.¹⁸⁶

Vendors of digital content often specify that the sharing of such downloads is prohibited under their terms and conditions.¹⁸⁷ Accordingly, such actions run the risk that the content provider could suspend the account.¹⁸⁸ In particular, transfers do not appear to be permissible for Apple and

¹⁷⁸ Fottrell, *supra* note 156.

¹⁷⁹ Moreno, *supra* note 152.

¹⁸⁰ Perez, *supra* note 163.

¹⁸¹ Perez, *supra* note 163.

¹⁸² Vivek Wadhwa, *Laws and Ethics Can't Keep Pace with Technology*, MIT TECHNOLOGY REVIEW (Apr. 15, 2014), <https://www.technologyreview.com/s/526401/laws-and-ethics-cant-keep-pace-with-technology/>.

¹⁸³ See e.g., Naomi R. Cahn & Gerry W. Beyer, *When You Pass on, Don't Leave the Passwords Behind: Planning for Digital Assets*, 26 PROB. & PROP. 40, 41 (Jan-Feb. 2012).

¹⁸⁴ See e.g., Victoria Blachly, *Planning for Fiduciary Access to Digital Assets*, PROBATE AND PROPERTY MAGAZINE (Mar. 13, 2018), https://www.americanbar.org/groups/real_property_trust_estate/publications/probate-property-magazine/2015/september_october_2015/2015_aba_rpte_pp_v29_5_article_blachly_planning_for_fiduciary_access_to_digital_assets/.

¹⁸⁵ See Moreno, *supra* note 152.

¹⁸⁶ See Moreno, *supra* note 152.

¹⁸⁷ Pidaparthi, *supra* note 167.

¹⁸⁸ Moreno, *supra* note 152.

Amazon accounts.¹⁸⁹ Even where a client establishes a clear desire to pass on their digital assets to their heirs in their will and their executors have all the necessary passwords to effectuate this transfer, carrying out such intent remains a dubious proposition.¹⁹⁰ According to Jas Purewal, an entertainment and digital media lawyer at the law firm Osborne Clarke, when it comes to passing on account's contents, "from a legal perspective there is nothing to leave."¹⁹¹ Purewal, who works with online entertainment companies, cannot recall encountering "any digital content providers who freely and openly allow the passage of ownership from one person to another."¹⁹²

Perhaps, however, the friends and family of the deceased can at least get access to the account. Apple's user license agreement provides that "[y]ou may not use anyone else's Apple ID, password or account without the express permission and consent of the holder of that Apple ID."¹⁹³ In other words, an individual could specify in their will that an heir has permission to access their account. Granting permission in such a manner should be sufficient to pass on digital assets to one's heirs, at least in theory.¹⁹⁴ In practice, the risk of Apple suspending an account regardless of what a will professes is very real.

As these approaches operate in largely uncharted waters, companies like Apple may simply modify their user agreements to exclude such transfers once they become too prevalent. Of course, there is also the possibility that consent from the deceased could not be obtained in a timely fashion. Either way, lawyers handling such estate and property matters have to consider that their clients will be eager to preserve their digital assets. Understanding the nuances of the user agreements signed by their clients is essential in order to achieve a satisfactory result. Having a working knowledge of technology allows a lawyer to offer practical solutions to a client's issues that a legal education may not cover.

Understanding basic technological services is crucial in order to ascertain the appropriate solution to a client's inquiries regarding their digital assets. This layer of complexity did not exist when internet devices were scarce, but technology has upended a lawyer's obligations in property law and estate management. In the pre-internet era, divvying up a couple's movies in a divorce or designating an heir to receive a music collection would be a matter of balancing priorities between present parties.¹⁹⁵ Such disputes were typically resolved by deciding who retains items based on agreements on personal taste, individual attachment, or simply by the whim of the actual

¹⁸⁹ Moreno, *supra* note 152.

¹⁹⁰ Blachly, *supra* note 184.

¹⁹¹ Hilary Osborne, *Do You Own Your Digital Content?*, THE GUARDIAN (Sept. 3, 2012, 11:10 AM), <https://www.theguardian.com/money/2012/sep/03/do-you-own-your-digital-content>.

¹⁹² *Id.*

¹⁹³ Jim Lamm, *Planning Ahead for Access to Contents of a Decedent's Online Accounts*, DIGITAL PASSING (Feb. 9, 2012), <http://www.digitalpassing.com/2012/02/09/planning-ahead-access-contents-decedent-online-accounts/>.

¹⁹⁴ Rob Walker, *Cyberspace When You're Dead*, N.Y. TIMES MAG. (Jan. 5, 2011), http://www.nytimes.com/2011/01/09/magazine/09Immortality-t.html?pagewanted=all&_r=0.

¹⁹⁵ Lamm, *supra* note 193.

purchaser.¹⁹⁶ Nowadays, a third party, like Apple or Amazon, will largely dictate how such assets will be controlled through their user agreements and account guidelines.¹⁹⁷

Thus, a lawyer hoping to fulfill a client's wishes in transferring digital assets must contend with a dense user agreement first. While clarifying the repercussions of user agreements to anxious clients impedes a prompt resolution, choosing to ignore the disruptive potential of these agreements would be a reckless lapse of judgment. As mentioned, Apple and Amazon's user agreements are structured in a way that hypothetically allows for account transfers, but also mandates that ownership rights are ultimately retained by the company.¹⁹⁸ In either case, understanding these agreements is vital in order to appropriately manage the expectations of all parties. Grasping such information permits a lawyer to describe the realistic outcomes of any attempt to transfer digital assets that are governed by a user agreement. A technologically-aware lawyer is better-equipped to avoid promising undeliverable outcomes to clients. On the whole, lawyers entrusted with managing a client's estate must be cognizant of the myriad of ways that technology has complicated this process.

V. PREDATORS ON THE WEB

Naturally, other areas of law have been complicated by the ubiquitous presence of internet-connected devices. In particular, criminal and tort law have been expanded to encompass the variety of issues that has coincided with the prominence of technology in society.¹⁹⁹ Becoming technologically literate (e.g., knowing how to use platforms like email, text messaging, and various forms of social media as well as the basic capabilities of computers and smartphones) is a crucial step for lawyers, as modern technology is often at the heart of their client's problems.

Lawyers grappling with these novel cases need a creative touch to craft a litigation strategy that identifies the impact technology can have on a client's well-being and sense of security. Lawyers like Carrie Goldberg, a thirty-nine-year-old Brooklyn attorney with a practice specializing in sexual privacy, have helped carve out a new field of law.²⁰⁰ Goldberg's firm tackles so-called "revenge porn" cases, where explicit images of individuals are published online without their consent.²⁰¹ The abundance of smartphones and other internet devices has caused such intimacies to be more easily shared.²⁰² Often, these images are disseminated as a way to exact

¹⁹⁶ Walker, *supra* note 185; See also, John Conner, Comment, *Digital Life After Death: The Issue of Planning for a Person's Digital Assets After Death*, 3 EST. PLAN. & CMTY. PROP. L.J. 301, 321 (2010-2011).

¹⁹⁷ Lamm, *supra* note 193.

¹⁹⁸ Victor Luckerson, 7 *Surprising Things Lurking in Online 'Terms of Service' Agreements*, TIME (Aug. 28, 2012), <http://business.time.com/2012/08/28/7-surprising-things-lurking-in-online-terms-of-service-agreements/>

¹⁹⁹ Margaret Talbot, *The Attorney Fighting Revenge Porn*, THE NEW YORKER (Nov. 27, 2016), <http://www.newyorker.com/magazine/2016/12/05/the-attorney-fighting-revenge-porn>.

²⁰⁰ *Id.*

²⁰¹ *Id.*

²⁰² Misery Merchants, THE ECONOMIST (July 5, 2014), <http://www.economist.com/news/international/21606307-how-should-online-publication-explicit-images-without-their-subjects-consent-be>.

punishment on the people who placed such trust in them.²⁰³ After grappling with such a betrayal, the victims must scramble to try and get intimate images of themselves, or graphic ads offering their sexual services, off the internet before they go viral and strangers start showing up at their homes or places of work.²⁰⁴ Certainly, the emergence of these new fields stems from the need to confront some of the more despicable effects of modern technology.

For attorneys like Goldberg, confrontation can entail brokering with a pornographic website in order to remove the photos of her clients.²⁰⁵ Yet such efforts are relatively benign compared to the assistance that other clients require. For instance, Goldberg has also handled cases where clients were in the midst of being extorted, either into providing sex or money, because someone had graphic pictures of them and was threatening to send the images to employers or family members.²⁰⁶ Disturbingly, this trend has affected vulnerable populations like teens and young adults.²⁰⁷ Both of these groups might feel too embarrassed to seek help from their parents and other authority figures. In fact, Goldberg has had students approach her who have been sexually assaulted and had the incidents recorded on cell phones.²⁰⁸ In addition to that trauma, such students then have to go to school with peers who may have been watching the videos in the cafeteria or the hallways.²⁰⁹ Fortunately, those faced with such incalculable torment do have a number of legal solutions.

A. National Menace

According to University of Maryland law professor Danielle Citron, if an individual took a photo and someone else posted it online, they may be able to use a federal copyright law to get the photo taken down.²¹⁰ Alternatively, twenty-seven states have decided to legislate against the perpetrators of revenge porn and carve out distinct regulations against them.²¹¹ Bills have been proposed in Congress to impose broader restrictions at the federal level.²¹² For example, U.S. Rep. Jackie Speier (D-CA), introduced the Intimate Privacy Protection Act, which would impose

²⁰³ Talbot, *supra* note 199.

²⁰⁴ See e.g., Gabriella Paiella, *Oregon Man Becomes First Sentenced to Jail Time Under State's Revenge-Porn Law*, NEW YORK MAG. (Dec. 2, 2016), <http://nymag.com/thecut/2016/12/oregon-man-sentenced-to-jail-under-revenge-porn-law.html>.

²⁰⁵ Talbot, *supra* note 199.

²⁰⁶ Talbot, *supra* note 199.

²⁰⁷ See Andrea Peterson, *I in 25 Americans Has Faced or Been Threatened with 'Revenge Porn'*, THE WASHINGTON POST (Dec. 13, 2016), https://www.washingtonpost.com/news/the-switch/wp/2016/12/13/one-in-25-americans-has-faced-or-been-threatened-with-revenge-porn/?utm_term=.54f8f5448267.

²⁰⁸ Talbot, *supra* note 199.

²⁰⁹ Talbot, *supra* note 199.

²¹⁰ Peterson, *supra* note 207.

²¹¹ Amanda Osorio, *Revenge Porn Laws*, REVISION LEGAL (Apr. 25, 2016), <https://revisionlegal.com/revision-legal/revenge-porn-laws/>.

²¹² Rebecca Blair, *Proposed 'Revenge Porn' Law Sparks Fresh Debate*, THE NAT'L L.J. (July 18, 2016, 12:00 AM), <http://www.nationallawjournal.com/id=1202762656886/Proposed-Revenge-Porn-Law-Sparks-Fresh-Debate?slreturn=20170025162308>.

criminal sanctions on those who engage in non-consensual pornography.²¹³ The proposed law carries a penalty of up to five years in prison and a monetary fine.²¹⁴ Despite these pathways, some victims struggle to get police to respond to this type of harassment, according to Citron. Citron also notes that, “Law enforcement is playing catch-up on both training about the law and technology, when victims go to law enforcement; the response is commonly to say that nothing can be done.”²¹⁵

For lawyers, revenge porn transcends the traditional legal approaches to handling typical forms of harassment. While revenge porn is a difficult issue to solve legally, it is unlikely to dissipate any time soon. As long as taking and sharing photos remains simple and easy, criminals will seek to leverage those photos for nefarious purposes.

B. *The Need for Novel Solutions*

The threat posed to society by revenge porn tactics lies in the highly transmittable nature of digital property.²¹⁶ Counseling clients dealing with revenge porn presents a delicate matter. Taking immediate steps to curtail the continued spread of a client’s intimate photos is critical.²¹⁷ In terms of legal action, a lawyer can do so through injunctive relief or criminal charges against an identified culprit, especially if the crime occurred in a state that has a specific law against revenge porn.²¹⁸ Furthermore, if the photos were posted to a website, a lawyer could submit a copyright takedown notice on behalf of their client demanding that they be removed.

These legal maneuvers represent direct and significant measures a lawyer can present to a client as ways to address their immediate concerns. Providing prompt assurances that action can be taken to mitigate the trauma of a client who has been victimized by revenge porn is vital. Of course, a lawyer should not assume the role of therapist and conjure up ways to console a beleaguered client.²¹⁹ Instead, lawyers must understand and provide the available legal solutions. Revenge porn in particular is a problem that leaves clients little use for a lawyer who has to play catch-up about the relevant laws.

Being able to help clients solve their revenge porn ordeal will require an empathetic approach. Clients are likely embarrassed about ending up in such a predicament. Accordingly, lawyers must

²¹³ Peterson, *supra* note 207.

²¹⁴ Peterson, *supra* note 207.

²¹⁵ Peterson, *supra* note 207.

²¹⁶ Peterson, *supra* note 207.

²¹⁷ Jessica Roy, *How Tech Companies Are Fighting Revenge Porn---And Winning*, The Cut (June 24, 2015), <https://www.thecut.com/2015/06/how-tech-companies-are-fighting-revenge-porn.html>.

²¹⁸ Sara Ashley O'Brien, *Woman Awarded \$6.45 Million in Revenge Porn Case*, CNN (Apr. 9, 2018), <http://money.cnn.com/2018/04/09/technology/revenge-porn-judgment/index.html>; See also Erica Fink, *To Fight Revenge Porn, I had to Copyright my Breasts*, CNN (Apr. 27, 2015), <http://money.cnn.com/2015/04/26/technology/copyright-boobs-revenge-porn/index.html?iid=EL>.

²¹⁹ Leslie A. Gordon, *How Lawyers Can Avoid Burnout and Debilitating Anxiety*, ABA J. (July 2015), http://www.abajournal.com/magazine/article/how_lawyers_can_avoid_burnout_and_debilitating_anxiety.

be wary of coming off as judgmental or patronizing. Understanding how such an unfortunate situation can arise easily with modern technology is key for a lawyer to project empathy. Naturally, a client will already feel remorse for making themselves vulnerable to the harassment they are receiving, so any kind of admonishment will only alienate them further. Specifically, empathy can aid the lawyer in building rapport with her client, thus fostering a more beneficial relationship, which can in turn lead to more thorough legal analysis.²²⁰ By understanding the nature of the internet, as well as the ease and normalcy surrounding the act of sending pictures via smartphone, a lawyer is better suited to address a client's needs, both emotionally and legally.

Unfortunately, empathy often seems easier in theory than in practice. This is especially true when it comes to situations that a lawyer may personally find unfathomable, like texting someone intimate photos of themselves. Lawyers may be more likely to express dismay at using technology in such a way, partly because of the legal profession's emphasis on privacy and discretion.²²¹ Understanding the nuances of technology—including its pitfalls—allows a lawyer to better grasp how a client may choose to use it. Familiarity with technology facilitates empathy for client's who become ensnared by it. As Goldberg puts it,

[E]ven if you did take a naked picture and send it to somebody, that's not necessarily reckless behavior. That's time-honored behavior! G.I.s going off to war used to have pics of their wife or girlfriend in a pinup pose. It's often part of intimate communication. It can be used as a weapon, but, the fact is, almost anything can be used as a weapon.²²²

Ultimately, a lawyer does not have to identify with a client's decision to send intimate photos of themselves but recognizing that such actions are not wholly irrational can enable the development of a more productive relationship with a client. Lawyers should develop compassion for their clients because the desire for an emotional catharsis can be just as compelling as the need for legal absolution.²²³ Legal problems like revenge porn can be just as emotionally painful as they are complex. A lawyer who can comprehend the technological habits of their client is better equipped to provide the appropriate response—both legally and emotionally.

Overall, this informed approach serves lawyers well in any situation where modern technology is involved. Familiarity with smartphones, computers, and the internet can empower a lawyer to make informed decisions on a multitude of legal dilemmas. Clients will welcome a lawyer who can not only grasp the legal implications of their problem but can also understand, for example, the importance of a vast iTunes library or realize that sending intimate photos is not always a foolish endeavor. Lawyers who can demonstrate an ability to understand the implications of modern technology also underscore their ability to engage in concerted problem solving.

²²⁰ Kristin B. Gerdy, *The Heart of Lawyering: Clients, Empathy, and Compassion*, BYU L. REV. 189 (Dec. 2012), http://digitalcommons.law.byu.edu/life_law_vol3/24.

²²¹ Daniel R. Fischel, *Lawyers and Confidentiality*, 65 U. CHI. L. REV. 1 (1998).

²²² Talbot, *supra* note 199.

²²³ Talbot, *supra* note 199.

CONCLUSION

Recent technological advances indicate that the legal profession will undergo a transformation. In response, lawyers can either embrace technological trends or impassively deny the impact of these trends on their livelihood. Computers have already upended the way legal research is conducted. Whether it is how lawyers research, communicate, or do their paperwork, machines have both assisted and disrupted the legal profession. In addition, the emergence of robotic lawyers demonstrates the exponential progress made towards automating the basic functions that human attorneys have normally offered. Lawyers concerned about becoming obsolete cannot afford to despair about what the future holds. The numerous legal problems that have arisen from the widespread use of smartphones and computers necessitates a proactive approach from lawyers. The essential obligation to serve a client's needs forces lawyers to pay attention to current technological trends. Thus, lawyers cannot simply rest on their laurels and assume that they need not expand their knowledge to encompass new technological innovations.

Client-centered lawyering relies on being able to appreciate the nuances of a client's needs. For cases involving technology, a theoretical understanding will not suffice. Without adequate appreciation for context, an attorney's ability to effectively solve a client's problem and maintain a productive dialogue is greatly diminished. Certainly, conjuring up legal solutions for issues involving digital assets or revenge porn becomes a fruitless endeavor without the necessary technological competence to unearth vital information from a client. Asking the right questions and actively listening for crucial details have always been central tasks of attorneys. The ability to ask informed questions requires a basic understanding of the emerging technology that clients regularly encounter. As technology takes on an even greater importance in our society, lawyers will have to learn how to safely utilize computers and other equipment in their own practice. Blithely re-using the same sloppy passwords or ignoring email accounts represent not just unwise personal foibles, but a dereliction of professional responsibility.

Ultimately, lawyers have always adapted to changing circumstances as the law evolves, and while this current transformation is not as palpable as a Supreme Court holding, it presents no less of a sea change for how lawyers will operate in the future. Safeguarding client information and their assets from technological blunders will be a perplexing aspect of the legal profession going forward. As a result, proactive engagement with modern technology allows a lawyer to develop an empathetic and informed approach to these upcoming quandaries. Lawyers should welcome this new opportunity to expand their repertoire and become more responsive to their client's needs. After all, the zealous drive to adapt that has spurred on generations of lawyers to succeed can be harnessed to overcome any instability in the legal field. Technology is uncertain, but a lawyer's resolve to expertly advise their clients must remain unshakable.