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MINDING THE GAPS IN LAWYERS’ RULES OF PROFESSIONAL CONDUCT

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Abstract

When lawyers’ rules of conduct fall short in expressing contemporary professional responsibility values, regulators fill this gap with modifications, additions, and subtractions to or from enumerated provisions. One example of this phenomenon makes reference to technology in legal practice: A comment to Rule 1.1 added in 2012 tells lawyers that competent representation now includes knowing the risks and benefits of “relevant technology.” Offering a wider instance of gap filling with respect to the Model Rules of Professional Conduct, this Article commends artificial intelligence as a source of guidance to individual lawyers that works by locating instances of inadvertence before they occur. It notes specifics of how the profession can (and already does) use this technology to help mind that gap and nominates continuing legal education as a source of expansion.

I. Introduction: A Gap That Needs Minding

Scene: Tranquil mid-February afternoon, law professor minding her own business at her computer screen. A message pops up, ostensibly from a leader at her school: “Are you available?”¹

This e-scam was floating into other law school computers around the country at the time, purporting to come from higher administrators, but the question looked genuine and innocuous in the moment. I wrote back answering yes. Disguised as my colleague, the thing chatted for a few friendly sounding rounds. It did not answer questions directly, but its share of the dialogue was consistent with the rest of our colloquy.

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1. Yuyang Zhao, “Are You Available” – Phishing Scam, LOY. INFO. SECURITY BLOG (Sep. 27, 2018), <http://blogs.luc.edu/uiso/2018/09/27/are-you-available-phishing-scam-september-27-2018/>.

Then came another message that ended the adventure:

need you to help me get a google play card from the store,i will reimburse you back when i get to the office.I need to send it to someone and it is very important cause i'm still in a meeting and i need to get it sent Asap

Exiting the conversation, I mused at the successes in it that had preceded failure. An electronic intruder with bad intentions had corresponded patiently, appearing to engage and even listen rather than swoop in with a demand for money. It kept a conversational ball rolling. It explained that the colleague named on the message was trapped in a meeting off campus, a plausible assertion in an educational context. All seemed well enough, a little odd but not that odd.

But the scam-programmer apparently did not care enough to know that an American higher-education administrator would not have written that last paragraph. For him (I think he's a him) English may have been lingua franca, a language he knew well enough to get by but no better. He appeared unaware of the need to polish his pitch. Savvy enough at coding to spoof an e-address and follow the rudiments of replies,² he or his paymasters almost certainly had enough money to hire an American minion with sufficient education to review the message for tone and punctuation.³ If the originators of this project had set up a smoother paragraph to make the ask, this particular target probably would not have bought "a google play card from the store," if only because she would not have been sure what to select or which store to stop at—but I would have stayed fooled longer by a smoother presentation.

2. One of my Brooklyn colleagues reported that when she received this bit of phishing she typed back an apology for being out of town, a response that the bot comprehended well enough to say nothing in reply. This colleague learned from talking to others in our building that the dialogue continued only with recipients who, like me, answered something affirmative to "are you around."

3. Talent must be amply available, as one vendor offers a munificent twenty-five cents to fill out one of its surveys. Jeff Proctor, *13 Best Places to Take Paid Online Surveys for Money (Up to \$50/hr)*, DOLLARSPROUT.COM, <https://www.dollarsprout.com/paid-online-surveys/> (last updated Apr. 10, 2019). Rates can go as high as fifty dollars for strenuous or demanding questionnaires. *Id.* Scammers willing to spend a little more cash can learn that many, perhaps most, individuals old enough to hold power in an academic environment type two spaces after a period; according to a college admissions consultant, the second extra space communicates to readers of an application that a hovering parent composed at least part of an essay bylined by the applicant. JM Farkas, *How I Know You Wrote Your Kid's College Essay*, N.Y. TIMES (Oct. 3, 2018), <https://www.nytimes.com/2018/10/03/well/family/how-i-know-you-wrote-your-kids-college-essay.html>.

Unfortunately for his undertaking, the fraudster did not know what he did not know.

Lawyers as a group are probably more trustworthy than the bot-villain of this anecdote, but they too do not know all they do not know. In this Article I explore the possibility of their taking action to fill gaps of awareness and consciousness that impede their work. Professional regulators, by which I mean authorities who control law licenses in a jurisdiction (hereinafter sometimes “the bar”), might also want to generate and learn from more information about omissions and inadvertence in the practice of law. This Article speaks to these audiences. In its role as part of a symposium on lawyering in an age of artificial intelligence (hereinafter occasionally “AI”),⁴ it enlists electronic technology in a project of locating and repairing gaps in the quality of services that lawyers furnish to clients.

What are these gaps, and how are they filled? Part II starts by considering historical changes to rules of professional conduct as gap filling. Regulators observe an omission in their rulebook and plug the hole. This pattern, I contend, has parallels for an individual lawyer, who can also rectify habitual omissions and instances of inadvertence before these lapses occur. Next, Part III examines artificial intelligence as an aid to this work. The conclusion, Part IV, sketches an idea about how the bar could put gap filling into effect through continuing education.

4. Law review articles on artificial intelligence face a judgment call on the definition of the term. One writer, after quoting several authorities, including the supposed “father of A.I.,” John McCarthy, settled on what I quote as satisfactory enough: “In short, it is computers that think. Okay, maybe the computer is not ‘thinking’ in the same vein as a living organism does, but the computer can sift through data and make computations on a much quicker basis than the human mind. It can produce results that mimic thinking.” William J. Connell, *Artificial Intelligence in the Legal Profession—What You Might Want to Know*, R.I. BAR J., May/June 2018, at 5, 5. Working with a near-term feasible (in contrast to an intellectually ambitious) understanding of how to use the McCarthy definition, this Article focuses more on its “data” constituent than its “think.” The subset of artificial intelligence that I have in mind is taught and studied at the Legal Analytics and Innovation Initiative at Georgia State College of Law, a center that identifies “techniques to identify patterns within masses of unstructured legal data to unlock insights that were previously buried within thousands of pages of text.” *Legal Analytics & Innovation Initiative*, GA. STATE. UNIV. COLLEGE OF LAW, <https://law.gsu.edu/legal-analytics-innovation-initiative/> (last visited June 25, 2019). My thanks to Dana Brakman Reiser for connecting LAII’s mission to the thesis of this Article.

II. Gap Filling as Professional Responsibility for Lawyers

Revisions to the Model Rules of Professional Conduct document a variation on the gap filling that this Article commends. The American Bar Association (ABA) writes constraints on lawyers in copyrighted work product that it makes available as models. What the ABA produces, like any codification that regulates conduct in a liberal democracy (a term I use loosely enough to include all the United States), necessarily contains the seeds of its own improvement. Persons subject to sanctions or penalties can look up what they may, must, and must not do. When all can learn what these rules say, useful emendations to them will ensue. Though drafted in language that demands compliance, obligations, prohibitions, and permissions, these rules do not stop at the orders they give. They invite debate, amendment, reinforcement of rules that work well, modification or substitution of ones that need change, and clarifications about their scope.⁵ Influences emerge from experience.

Writings that fill the large secondary literature on the Model Rules both demonstrate and support this vitality. This text has been providing model content for regulators to impose on lawyers for decades, and observers have questioned numerous choices in it. Provisions about confidentiality occupy an especially large share of the critical corpus, but writers have begged to differ with the Model Rules also on conflicts of interest, representation of clients with disabilities, client perjury, and more.

The 2016 change to Model Rule 8.4 to put a seventh prohibition into full disciplinary black letter provides an example of gap filling through elevation. Before the codification of paragraph (g), the Rules had condemned discriminatory conduct in the practice of law only in a comment. Both before and after this reform, activists, legal scholars, and lawyers working inside the ABA discussed the possibility that the Model Rules were too tolerant of harmful conduct.⁶ Many regulators appeared to share their concern: by the time revision arrived in 2016, about half of the American jurisdictions had made discrimination in the practice of law a disciplinary offense, although

5. See Nancy J. Moore, *Lawyer Ethics Code Drafting in the Twenty-First Century*, 30 HOFSTRA L. REV. 923, 927 n.32 (2002) (counting Model Rules 1.13, 2.2, 2.3, 3.2, 5.1-5.3, and 8.5 as examples of “entirely new rules addressing subject areas not previously addressed” by the precursor ABA codification, the Model Code of Professional Responsibility).

6. See Rebecca Aviel, *Rule 8.4(g) and the First Amendment: Distinguishing Between Discrimination and Free Speech*, 31 GEO. J. LEGAL ETHICS 31, 35 (2018); Stephen Gillers, *A Rule to Forbid Bias and Harassment in Law Practice: A Guide for State Courts Considering Model Rule 8.4(g)*, 30 GEO. J. LEGAL ETHICS 195, 202-07 (2017).

their choices of which conduct to prohibit strayed from the ABA model rule.⁷ As a newly added increment, paragraph (g) filled a gap in Rule 8.4.

The ABA initiative named Ethics 2000 offers an extended example of this phenomenon that introduces technology to gap filling. In its report to the ABA House of Delegates, the Commission on Evaluation of the Rules of Professional Conduct (“Ethics 2000”) explained that what impelled its recommendations to the Rules included “new issues and questions raised by the influence [of] technological developments” and “substantial and high-velocity changes in the legal profession.”⁸ This initiative filled gaps in 2002 with new inclusions.⁹ Consider also the expansion of the duty of confidentiality to recognize the risk of inadvertent disclosure, added to Rule 1.6 in 2012, and the liberalization of the work foreign lawyers may do in a United States jurisdiction, done through modification of and additions to Rule 5.5 in 2013. All these changes can be understood as aimed at addressing long-standing voids in the Model Rules. Readers of the Rules urged these inclusions before the ABA codified them.

Ongoing revision is a kind of breath on the mirror that shows vitality in professional-conduct codifications that govern lawyers. Rules of professional conduct contemplate ideals that are durable without being static. Values for lawyers found in the ABA’s model document—among them candor, fairness, loyalty, and respect for boundaries—intersect dynamically with other priorities. Sometimes these values collide,¹⁰ a reality that calls for perpetual alertness and reexamination. The same reassessment, self-questioning, and

7. Gillers, *supra* note 6, at 208-10.

8. ABA ETHICS 2000 COMM’N, REPORT TO THE AISA HOUSE OF DELEGATES (Aug. 2001), https://www.americanbar.org/content/dam/aba/administrative/professional_responsibility/report_hod_082001.pdf.

9. Along with one deletion, the late MODEL RULES OF PROF’L CONDUCT r. 2.2 (AM. BAR ASS’N 2018).

10. Probably the most famed illustration of this lively intersection is a “trilemma” for criminal defense lawyers first broached in Monroe H. Freedman, *Professional Responsibility of the Criminal Defense Lawyer: The Three Hardest Questions*, 64 MICH. L. REV. 1469 (1966). In paraphrase:

First, competence requires lawyers to seek all information that can aid a client's matter. Second, lawyers have a duty of confidentiality that generally forbids them to use a client's information except for the client's benefit. Third, lawyers have a duty of candor to the court that may require them to reveal a client's confidential information in order to prevent or correct fraud on the court (which perjury would be).

Stephen Gillers, *Monroe Freedman's Solution to the Criminal Defense Lawyer's Trilemma Is Wrong as a Matter of Policy and Constitutional Law*, 34 HOFSTRA L. REV. 821, 821 (2006).

willingness to revise that characterize the rulebook are present also in the obligation imposed on lawyers to heed its commands.

Just as drafters and revisers of model rules ask themselves what has to change, so too can lawyers tasked with following these prescriptions take a vigilant approach to their work; like the writing of statutes and regulations, the practice of law calls for integration of the past with the future. *What can we learn from experience that informs the revision of our rules*, the bar inquires. For persons who hold law licenses, a complementary question: *What can I learn from my experience in the practice of law that informs the way I work?*

III. How Artificial Intelligence Can Help Lawyers Mind the Gap

Attention to artificial intelligence as a constituent of professional responsibility complies with a mandate for lawyers that entered the Model Rules of Professional Conduct in 2012. The ABA view of competence had been starkly silent on technology before then, saying only that “[t]o maintain the requisite knowledge and skill, a lawyer should keep abreast of changes in the law and its practice.”¹¹ What those changes were or might become, Rule 1.1 did not specify. The Rules now identify technological innovation as central to these changes, replacing a period at the end of its old sentence with a comma and adding a clause: “including the benefits and risks associated with relevant technology.”¹²

Artificial intelligence thus becomes a “relevant technology” to aid the fulfillment of lawyers’ duties. But there’s more. A larger pattern in studies of AI brings an inclination to connect the past to the future. Writers frequently identify developments on the horizon as useful with respect to a current problem or need. Following this design, let us look at the Model Rules, first with attention to conditions pertinent to artificial intelligence that are already there, and second with the short-term future in mind.

A. The Pervasive Presence of Artificial Intelligence in the Model Rules

Furnishing a helpful foundation for recommendations about using artificial intelligence to fill gaps in the effective and ethical practice of law, a recent article surveys “robo-lawyering” as a professional responsibility

11. MODEL RULES OF PROF’L CONDUCT r. 1.1 cmt. 6 (AM. BAR ASS’N 2012).

12. MODEL RULES OF PROF’L CONDUCT r. 1.1 cmt. 8 (AM. BAR ASS’N 2018).

concern.¹³ Instances of this intersection that Drew Simshaw and others have gathered, and which attention to electronic technology in these pages would join, show the pervasiveness of artificial intelligence in lawyers' ethics. Artificial intelligence has a home in all eight Articles of the Model Rules. Some examples below illustrate AI as a source of danger, others as an aid to doing the right thing.

1. *Article 1: Client-Lawyer Relationship*. Anticipating a day “when machine intelligence becomes as good as lawyers in developing some service,”¹⁴ John McGinnis and Russell Pearce advert thereby to the duty of competence as provisioned in the just-mentioned Rule 1.1. Machines will become even more skillful over time, McGinnis and Pearce continue, getting “better and better” at work that lawyers now do using their non-artificial human intelligence “both in terms of performance and cost.”¹⁵ This reference to cost introduces another Article 1 topic to the mix, the reasonable fee.¹⁶ Whenever artificial intelligence applied to a particular task laps past the human version and can do a good job faster, lawyers arguably overcharge clients when they apply their minds to a task and bill for this usage.

McGinnis and Pearce might be a little bit ahead of attainable reality,¹⁷ but artificial intelligence is already an Article 1 issue. Technologies that support electronic discovery and cloud storage can jeopardize client confidentiality,¹⁸ and the duty of competence obliges lawyers to make themselves aware of this risk.¹⁹ The obligation to communicate with clients as provisioned in Model Rule 1.4 might require lawyers to tell clients how they use artificial intelligence in the office, and to notify them when confidentiality has been

13. Drew Simshaw, *Ethical Issues in Robo-Lawying: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law*, 70 HASTINGS L.J. 173 (2018).

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

15. *Id.*

16. MODEL RULES OF PROF'L CONDUCT r. 1.5.

17. See Dana Remus & Frank Levy, *Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law*, 30 GEO. J. LEGAL ETHICS 501, 504 (2017) (so arguing).

18. See Timothy D. Edwards, *Ethics, Professionalism, and E-Discovery*, WIS. LAW. (Jan. 2017), <https://www.wisbar.org/NewsPublications/WisconsinLawyer/Pages/Article.aspx?Volume=90&Issue=1&ArticleID=25320> (noting the intersection of confidentiality and electronic discovery); N.Y. State Bar Ass'n Comm. on Prof'l Ethics, *Ethics Opinion 842*, N.Y. ST. B. ASS'N (Sept. 10, 2010), <https://www.nysba.org/CustomTemplates/Content.aspx?id=1499> (considering cloud storage as a risk to confidentiality).

19. Simshaw, *supra* note 13, at 197-99.

compromised.²⁰ Bulk that reposes indefinitely in law office storage implicates the Rule 1.9 duty of confidentiality owed to former clients.²¹

2. *Article 2: Counselor.* Article 2 of the Model Rules does not contain much, but it has enough content to intersect with artificial intelligence. Lawyers may or may not be rendering the “independent professional judgment” demanded in Rule 2.1 when they rely on systems that have intelligence of their own.²² Rule 2.1 encourages lawyers to consider “moral, economic, social and political factors.”²³ Although it is fair to say that the methods of AI are strong on outcomes and relatively inept at the task of using reason,²⁴ machine learning in its current state holds information about the moral, economic, social, and political reasoning that lawyers could apply to their clients’ needs.

3. *Article 3: Advocate.* The tribunal sited at the center of Article 3 offers numerous opportunities for enlisting artificial intelligence. Drew Simshaw opens his article with a description of DoNotPay, a bot created by an entrepreneur who had recently graduated from high school. From its onset, DoNotPay did a decent job disputing parking tickets online.²⁵ Traffic ticket defense is a locus of litigation expertise (even if jokes about it get tedious for the practitioner, and most of the tickets are for moving violations rather than parking),²⁶ which means that artificial intelligence has been working as a litigator before a tribunal.

In this volume Stephen Henderson speaks to Article 3 when he anticipates artificial intelligence deployed to do the work of criminal prosecution and defense.²⁷ “When will this happen?” Henderson queries, referring to the attainment of “human-level and human-breadth intelligence” good enough for this task. His answer: “On a Life 1.0 to 3.0 timescale, in the blink of an eye.” Then: “Most believe we are looking at somewhere between a few decades to a century.”²⁸ Model Rules on point await that day, with Article 3

20. *See id.* at 202 (citations omitted).

21. *Id.* at 205.

22. *Id.* at 203-04.

23. MODEL RULES OF PROF'L CONDUCT r. 2.1.

24. *See* Simshaw, *supra* note 13 (citing Remus & Levy, *supra* note 17, at 548-49).

25. *Id.* at 174-75.

26. Michael J. Palumbo, *Everything You Always Wanted to Know, but Were Afraid to Ask, About a Supporting Deposition in a Traffic Infraction Case*, 41 WESTCHESTER B.J. 47, 47 (2016).

27. Stephen E. Henderson, *Should Robots Prosecute and Defend?*, 72 OKLA. L. REV. 1 (2019).

28. *Id.* at 7-8.

containing provisions addressed to prosecutors and criminal defense lawyers, along with others that regulate litigators generally.²⁹

4. *Article 4: Transactions with Persons Other Than Clients.* Artificial intelligence pops up in the final rule of Article 4, telling a lawyer who receives “electronically stored information” that relates to the lawyer’s representation of a client to notify the sender when the lawyer has reason to believe the information was sent inadvertently.³⁰ All lawyers must respond properly to a transmittal that might have originated in the decisions and maneuvers of a machine, regardless of whether they use AI in their practices.

5. *Article 5: Law Firms and Associations.* The arc of a lawyer’s career, especially but not only in the private sector, typically will include time as both a supervised worker and a supervisor. Article 5 addresses both roles. Junior lawyers do not (yet) report to a machine as their supervisor, but because “AI services will frequently be, or at the very least involve, third parties,”³¹ this technology generates the supervision duties provided in Rules 5.1 and 5.3. These duties may oblige a lawyer to vet the AI product she uses, learn what the product can and cannot do, and double-check its output.³²

6. *Article 6: Public Service.* The limited black letter in this corner of the Model Rules does not speak directly to artificial intelligence, but because vendors offer AI modules like Legal Zoom as a cheaper alternative to human lawyers, this technology has been understood as a response to the problem of unmet needs for civil legal assistance.³³ Scholars divide on the feasibility and desirability of this prospect.³⁴ For present purposes, I note only that some iterations of it are already here.

29. *E.g.*, MODEL RULES OF PROF'L CONDUCT r. 3.8 (AM. BAR ASS'N 2018); *id.* r. 3.6 (a rule closely linked to bar discipline imposed on Dominic Gentile, a criminal defense lawyer); see John Fletcher, Note, *Gentile v. State Bar of Nevada: ABA Model Rule 3.6 as the Constitutional Standard for Reviewing Defense Attorneys' Trial Publicity*, 46 SMU L. REV. 293 (1993).

30. MODEL RULES OF PROF'L CONDUCT r. 4.4(b).

31. Simshaw, *supra* note 13, at 200.

32. *Id.* at 201 (citation omitted).

33. *Id.* at 179-80.

34. Compare Emily S. Taylor Poppe, *The Future is ~~Bright~~ Complicated: AI, Apps & Access to Justice*, 72 OKLA. L. REV. 181 (2019) (expressing skepticism about AI as a source of estate plans for individuals who cannot, or have not, bought attorney time in the form of fees) with Henderson, *supra* note 27, at 16 (observing that the American “criminal justice system is heavy on the ‘criminal’ and light on the ‘justice,’” and so “it is hard not to get at least a bit excited about the potential of AGI criminal defense lawyers who could bring human-level—or even superhuman—competence to every minute (and even every microsecond) of every representation”).

7. *Article 7: Information about Legal Services.* Regulation of both advertising and solicitation falls under Article 7, and artificial intelligence is present in both types of communication. Here I have in mind twenty-first century mass communication sent with attention to the biography and tastes of an individual human target. The infamous pop-up ad, which everyone reading this Article has had the experience of slamming shut, engages with data stored in a user's computer and linked to identifiers that the advertiser can reach. Facebook, Amazon, and Google have notoriously pioneered on a front that lawyer advertising and solicitation can expect to follow.³⁵

8. *Article 8: Maintaining the Integrity of the Profession.* The catch-all rule in Article 8, Rule 8.4, contains broad prohibitions that include a ban on violating a Rule through the acts of another and on conduct that is prejudicial to the administration of justice.³⁶ This breadth can cover several of the risks that artificial intelligence poses. Let us return to the newest segment of Rule 8.4, noted above—the prohibition of harassment or discrimination on the basis of eleven protected civil rights categories.³⁷ Artificial intelligence can foster this misconduct.

Back to Facebook. Job seekers filed an action with the Equal Employment Opportunity Commission in 2018, in collaboration with a well-known labor union and the American Civil Liberties Union, that accused Facebook of targeting ads to exclude women.³⁸ A law firm could use its advertising to invite job applications from some groups and not others. Individuals who take up harassment could avail themselves of artificial intelligence to do their mischief, and lawyers are unfortunately represented in the ranks of racial and sexual harassers.³⁹

35. Readers can check out Andrew Stickel, *Every Lawyer Should Be Advertising on Facebook—A Step by Step Guide*, ELOA (Feb. 1, 2017), <https://www.eloa.org/lawyer-facebook-advertising/>, which tells lawyers how to post rather sneaky-sounding content as covert Facebook ads.

36. MODEL RULES OF PROF'L CONDUCT r. 8.4(a), (d) (AM. BAR. ASS'N 2018).

37. *Id.* r. 8.4(g).

38. Noam Scheiber, *Facebook Accused of Allowing Bias Against Women in Job Ads*, N.Y. TIMES (Sept. 18, 2018), <https://www.nytimes.com/2018/09/18/business/economy/facebook-job-ads.html>.

39. See, e.g., Eli Rosenberg, "I Am Not a Racist:" *New York Lawyer Apologizes for Rant About Spanish Speakers in Viral Video*, WASH. POST (May 22, 2018), https://www.washingtonpost.com/news/business/wp/2018/05/22/i-am-not-a-racist-new-york-lawyer-apologizes-for-rant-about-spanish-speakers-in-viral-video/?utm_term=.a677dd2d8da6 (reporting about a lawyer who was videotaped berating a manager of a restaurant about the manifested ethnicity of employees); *Weeks v. Baker & McKenzie*, 63 Cal. App. 4th 1128, 1136, 1177 (1998) (approving a multi-million dollar award of compensatory and punitive damages to the victim of workplace sexual harassment by a partner in a large law firm).

B. Two Artificial Intelligence Technologies to Help Mind the Gap

Writing about artificial intelligence in the year 2019 gives an author a range of postures to choose from on what this technology can do. Most of AI's promise presumably reposes in the future, allowing observers to characterize its prowess as mighty and even unimaginable. This Article favors a more modest and cautious perspective on it. Not out of skepticism about what new eras of artificial intelligence could transform—I am not especially skeptical—but because the project here is to consider changes to rulemaking and rule following that might occur today. This practical take points to two technologies that are either already invented and implemented or nearly ready to go.

1. Machine Learning/Deep Learning

In this Article, machine learning and deep learning are almost synonyms. One definition of machine learning explains that this application of AI tells computers to “learn from data, identify patterns and make decisions without much need for human interaction [or] guidance.”⁴⁰ As a subset of machine learning, deep learning is more capable of identifying patterns because it uses algorithms that mimic the structure of neurons in the human brain to learn from massive amounts of information. “For deep learning to function,” according to a thoughtful student article, “algorithms need to be fed data. Data mining uses algorithms to collect and analyze data.”⁴¹

Some results have been spectacular. Champions at the game of Jeopardy! who beat all their human opponents famously lost to artificial intelligence set up by IBM.⁴² Lawyers have also reaped rewards from deep learning. One instance of AI serving litigators comes from the experience of a prosecution team challenged by the task of proving insider trading. They thought that “a multimillion-document repository of evidence” could link trades with inside

40. Hannah Conrad, *Researchers Revamp Fundamental Methods Used in Machine Learning*, TEX. A&M TODAY (Jan. 22, 2019), <https://today.tamu.edu/2019/01/22/researchers-revamp-fundamental-methods-used-in-machine-learning/>. For an overview of machine learning written at a technical yet frequently accessible level, see SHAI SHALEV-SHWARTZ & SHAI BEN-DAVID, UNDERSTANDING MACHINE LEARNING: FROM THEORY TO ALGORITHMS (2014).

41. McKenzie Raub, Comment, *Bots, Bias and Big Data: Artificial Intelligence, Algorithmic Bias and Disparate Impact Liability in Hiring Practices*, 71 ARK. L. REV. 529, 533 (2018) (citations omitted).

42. Jamie J. Baker, *2018: A Legal Research Odyssey: Artificial Intelligence as Disruptor*, 110 LAW LIBR. J. 5, 7-9 (2018).

knowledge,⁴³ but they did not know where to start looking. AI knew. Prosecutors “fed [it] the dates of the allegedly questionable trades,” a bar journal reported.⁴⁴ “What did AI come up with? Baseball.”

That's right, baseball. It seemed that for every trade of a specific business entity, two of the parties involved emailed each other discussions about a specific baseball team. Thanks to this revelation, the prosecution was able to focus the document review and confirmed that a good number of Major League team names were code words for the sale of stock.⁴⁵

Another striking example of this technology used in recognizing patterns from data and then applying this knowledge to recognize similar patterns among new data comes by way of the medical profession. Researchers at Mount Sinai Hospital in New York developed a program that can predict disease (liver cancer, for example) in a patient just by examining the patient's record.⁴⁶ Trained by an enormous database of patient records from about 700,000 individuals, the program called “Deep Patient” uncovered hidden patterns within the hospital data that were indicative of future disease.⁴⁷ When presented with new patient records, researchers found that Deep Patient was extraordinarily good at predicting disease.⁴⁸ Surgeons have followed a nineteen-item checklist credited with reducing patient mortality rates when surgeons use the list both prior to and during surgery.⁴⁹

Privacy considerations in the United States have slowed the application of this technology to American patients in need of diagnoses: because deep learning in this Article works with data located centrally in a law office, the medical illustration shows its potential without the privacy problem. Like the “Deep Patient” program trained with electronic patient health records consisting of test results and doctor's visits, a parallel program for law firms can learn by analyzing client files, including lawyer notes, court decisions,

43. Allan Mackenzie & Will Stagl, *Artificial Intelligence: It's Time to Prepare*, ARIZ. ATT'Y, Oct. 2018, at 14, 16.

44. *Id.*

45. *Id.*

46. Riccardo Miotto et al., *Deep Patient: An Unsupervised Representation to Predict the Future of Patients from the Electronic Health Records*, NATURE: SCI. REP., article no. 26094 (May 17, 2016), <https://www.nature.com/articles/srep26094>.

47. *Id.* at 1-2.

48. *Id.*

49. Maia Szalavitz, *Study: A Simple Surgery Checklist Saves Lives*, TIME (Jan. 14, 2019), <http://content.time.com/time/health/article/0,8599,1871759,00.html> (noting that patient mortality rates were cut nearly in half and complications fell by more than a third).

client medical records, deposition transcripts, and other documents. Again like “Deep Patient,” this program would apply what it learned from familiar patterns to new client matters.

Machine learning put to use in the practice of law generates its own gaps that need minding. An illustration of this point comes from a recent bar journal article reminding readers that not everything in a firm’s hard drive or cloud storage is equally accessible. According to the authors’ estimate, about twenty to thirty percent of the content reposing in a law office’s document-management system consists of image-based PDFs that resist the automated searches that Windows and Mac operating systems provide.⁵⁰ Forty-eight vendors offer their law-firm customers products that can flag not-so-searchable image-based PDFs present in the data, but these customers have to know about this gap before they can make a plan to fill it.⁵¹ Countless other lacunae in deep learning exist. They will proliferate. Endorsement of this technology as a constituent of professional responsibility is the opposite of a final solution.

2. *The (Occasionally Annoying) Animated Assistant*

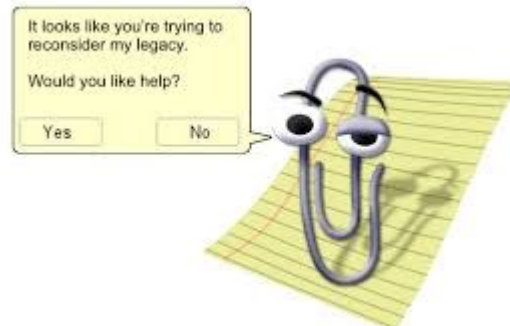
To give effect to what machine learning learns, consider an admittedly unspectacular version of AI: a pop-up interface in the form of the ubiquitous, if not dreaded, online chatbot. When the chatbot appears to ask about a possible gap that deep learning found, the lawyer would respond to the suggestion. With an irritated click to make the bot go away? Maybe. But not in the early beta days of the rollout, I speculate: it took us users a while to get this cranky. Snappier and less crude AI of the near future would make the pop-up more interesting and from there more tolerable to run into on-screen.

Law firms currently use chatbots to assist current or prospective clients with a legal issue specifically tailored to their own facts and circumstances. We see them continually when we do online searches on legal issues that take us to firms’ sites. For this version I have in mind less of the passive, wait-for-a-command artificial intelligence of today’s popular digital assistants, like Amazon’s Alexa or Apple’s Siri, and more of the assertive, nagging, and blunt interruption of Microsoft’s animated Clippy.⁵²

50. Mackenzie & Stagl, *supra* note 43.

51. *Id.*

52. Brian Feldman, *Clippy Didn’t Just Annoy You—He Changed the World*, N.Y. MAG. (Oct. 31, 2016), <http://nymag.com/vindicated/2016/10/clippy-didnt-just-annoy-you-he-changed-the-world.html>.



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Given the risk of harm to clients and the possible significance of professional responsibility obligations on point, the chatbot should be designed to interject itself right into the lawyer's digital workspace and require the attorney to answer questions concerning the advice given or the advice about to be given.

Code the bot to work with woke and un-woke users alike, enabling it to interact on a basis of "I know you want to do the right thing"⁵⁴ as well as "I know you're just clicking through the motions because you have to," which AI ought also to accommodate. Neo-Clippy in its early stages might team up with the cooperative early adopter sector. Organizations, including but not limited to law firms, could set up incentives for lawyers to give it a try.

C. Some Gaps That Lawyers Can Ask Artificial Intelligence to Mind

Artificial intelligence as presented in this Article fills gaps by alerting a lawyer to the possibility of omissions or inadvertence that, if unchecked, could subject a client to particular types of harm or put the lawyer at risk of violating a rule of professional conduct. Designers would set it up to be mindful of conditions. An array of such circumstances that relate to lawyers' professional responsibilities to their clients are on the horizon.

53. Image at *id.*

54. Online quizzes to test the taker's implicit bias are popular. The trove of information that individual takers have generated over the years is a lode of deep learning in its own right. See Jerry Kang & Kristin Lane, *Seeing Through Colorblindness: Impact Bias and the Law*, 58 UCLA L. REV. 465, 473 (2010) ("With over seven million completed tests, Project Implicit comprises the largest available repository of implicit social cognition data.").

Keenly awaiting smarter and wiser AI to come, the start presented here works with the technology we have rather than savvier machinery that lawyers will have at their fingertips in the near future. The AI category of deep learning is already represented well enough at the quotidian level of software that checks for conflicts and handles case management. Just as a late-twentieth century lawyer used this software as a reminder of what frail human memory tends to miss, contemporary counterparts can seek professional responsibility help from a source that already knows what is present in machines.

1. *Competence, as provisioned in Model Rule 1.1.* Artificial intelligence can help with attorneys' obligation to render competent representation by maintaining attention to individual-level gaps that awareness and organization can fill. Software could be programmed to issue prompts that individual attorneys know they habitually need. Imagine for example a lawyer aware of (or told by a colleague or supervisor about) her tendency to mix up the names of her corporate client's multiple subsidiaries. The bot in her machine could be directed to look for proper nouns—words that in English are typically topped by capital letters—when a document nears completion. If she tends to omit the uppercase key shift when she types, a program loaded with vocabulary on point could find the subs' names even in lowercase. Or think about a proprietary source of updates about primary materials, new judicial decisions, or changes to regulations, for example, that most lawyers consider too costly or cumbersome for ordinary daily work. The bot could suggest that she run a quick pass through the pricey add-on before signing off. Competence-through-AI here is for lawyers to think about patterns in their temperament, habits, or resources at hand, and to plan their gap-filling repairs in advance.

2. *Communication, as provisioned in Model Rule 1.4.* Applications of artificial intelligence to support communication might start with well-established editing software and become more ambitious from there. Reminiscent of the 2018 change to Gmail programmed to flag messages still unanswered after a couple of days,⁵⁵ the attorney version would know whether and by what means a lawyer has kept in touch with clients and other interested persons like non-client fee-payers. So envisioned, software would integrate multiple communication channels that lawyers use, including what

55. See C. Scott Brown, *Did You Forget to Reply to an Email? The New Gmail Will Remind You*, ANDROID AUTHORITY (May 14, 2018), <https://www.androidauthority.com/gmail-nudges-feature-865435/>.

are thought of today as social media,⁵⁶ aware that dialogue sprawls into varied spaces. Machine learning would have access to most of this material.

3. *Overcharging, as prohibited in Model Rule 1.5.* Here, the contribution of AI extends to both knowledge and opportunity. Time records of individual lawyers help to describe how much work the lawyer performed and by inference how much value the lawyer gave the client from these efforts. In large firms, where dozens of lawyers bill for categories of work that look alike, this data can demonstrate the amount of time needed to finish a task.

Artificial intelligence, as is its wont, can go further here than its basic applications. Professional responsibility expert Roy Simon has warned lawyers that giving particular types of work to a human being rather than a machine could rip off a client—if not now, then in the near future:

I think you are not charging an excessive fee if you continue using your customary methods instead of using a new-fangled AI product, but soon most lawyers will be using AI products and services for certain types of work (such as the cite-checking products discussed earlier), and charging for 10 hours of your time to do work that AI could do in 10 minutes sounds like an excessive fee to me. You have to keep abreast of the benefits of technology that applies to your practice.⁵⁷

Clients may even have a right to know about artificial intelligence opportunities, Simon adds, because “before long, practicing law without using AI will be like practicing law with an Underwood manual typewriter, and you will have to tell your clients that there is a better, cheaper, faster way.”⁵⁸

4. *Prohibitions of conflicts of interest, as provisioned in Model Rules 1.7 through 1.11.* The granddaddy of artificial intelligence applied to the practice of law has been in place for decades: when Susan Shapiro published many years’ worth of research on conflicts of interest in a 2002 book, on the same

56. That term of art, like others in this Article, may recede. *Cf.* Anita Bernstein, *Abuse and Harassment Diminish Free Speech*, 35 PACE L. REV. 1, 4 (2014) (observing that the names of nine popular social media mentioned “will soon seem absurdly quaint, if they do not already”).

57. Roy D. Simon, *Artificial Intelligence, Real Ethics*, N.Y. ST. B. ASS’N J., Mar./Apr. 2018, at 34, 37; *see also supra* text accompanying notes 15-16. Implications for the future of employment abound, of course. *See* Anita Bernstein, *Just Jobs*, 45 U. BALT. L. REV. 209, 245-47 (2016). *But see* Michael Simkovic & Frank McIntyre, *The Economic Value of a Law Degree*, 43 J. LEGAL STUD. 249, 275 (2014) (arguing that fears that technology will replace or supersede human lawyers are overblown).

58. Simon, *supra* note 57, at 37.

page she reported on both the widespread use of conflicts-checking software and the practice of a “huge Chicago firm utilizing microfiched records” along with materials stored in “index card files [and] dusty file rooms.”⁵⁹ Lawyers routinely tuck attention to possible conflicts of interest into a larger software package that aids in case management.⁶⁰ They can build on this base.

Positional conflicts, for example, present a proving ground for artificial intelligence. This species of conflict, where “the lawyer represents unrelated parties having antagonistic positions on a legal question that has arisen in different cases,”⁶¹ entered comments to the Model Rules in 2002 when the ABA declared that a conflict exists “when a decision favoring one client will create a precedent likely to seriously weaken the position taken on behalf of the other client.”⁶² This genre of conflict rarely reaches the attention of disciplinary authorities, but clients complain about it.⁶³ For their part, courts have used the term positional conflict when disqualifying attorneys from representing clients.⁶⁴

Deep learning can deepen lawyers’ awareness of this risk. For now I am thinking of the ability to identify routine overlaps, such as which cases (and which pages or keynote headings of these cases) lawyers in the same firm cite in briefs prepared for their entire client base to find out the uses of the same precedents toward different ends. More sophisticated AI would have the wisdom to follow implications beyond the repetition of particular proper nouns.

5. *Supervision, as provisioned in Rules 5.1 and 5.2.* At present, disciplinary rules for supervisory and supervised lawyers treat these people generously. A supervisor is responsible for the lapses of a lawyer who reports to her only when she ordered the rule-violating conduct, ratified it, or knew about the conduct at a time when its harms could have been mitigated but did

59. SUSAN P. SHAPIRO, TANGLED LOYALTIES: CONFLICT OF INTEREST IN LEGAL PRACTICE 300 (2002).

60. See Susan Saab Fortney & Jett Hanna, *Fortifying a Law Firm’s Ethical Infrastructure: Avoiding Legal Malpractice Claims Based on Conflicts of Interest*, 33 ST. MARY’S L.J. 669, 691-94 (2002).

61. John S. Dzienkowski, *Positional Conflicts of Interest*, 71 TEX. L. REV. 457, 529 (1993).

62. MODEL RULES OF PROF’L CONDUCT r. 1.7 cmt. 24 (AM. BAR. ASS’N 2018).

63. Dzienkowski, *supra* note 61, at 459.

64. *Sanford v. Commonwealth*, 687 F. Supp. 2d 591, 604 (E.D. Va. 2009); *Williams v. State*, 805 A.2d 880, 881-82 (Del. 2002). One court has cautioned that not all protests about positional conflicts are faithful to the meaning of this term as propounded in the classic article on the subject, Dzienkowski, *supra* note 61. See *N.J. Div. of Child Prot. & Permanency v. G.S.*, 149 A.3d 816, 836 n.13 (N.J. Super. Ct. App. Div. 2016).

not take remedial action.⁶⁵ And a supervised lawyer “does not violate the Rules of Professional Conduct if that lawyer acts in accordance with a supervisory lawyer’s reasonable resolution of an arguable question of professional duty”⁶⁶—the “I was just following orders” defense, modified only lightly by “reasonable.”

There are a few teeth pertinent to artificial intelligence here, however. A comment to Rule 5.1 says that supervisory lawyers must take steps “to provide reasonable assurance” of rule compliance.⁶⁷ These steps may include awareness of patterns manifested overtly in billing records and timekeeping. As for Just Following Orders as written into Rule 5.2, artificial intelligence makes it easier for supervised lawyers to investigate the reasonableness of some resolutions of arguable questions of professional duty proffered by supervisors.⁶⁸

6. *Catchall provisions in Rule 8.4.* This rich rule offers several possibilities for artificial intelligence to improve fidelity to lawyers’ duties. I mentioned Rule 8.4(g), the 2016 addition to the Rule that airlifted antidiscrimination from the comments into black letter. Artificial intelligence can help identify most of the eleven demographic characteristics included in the Rule’s recitation, and lawyers can use AI to locate unconscious or inadvertent bias in their practice of law.⁶⁹

Let us return to the Facebook illustration that came up earlier in this Article, this time in a more optimistic frame.⁷⁰ That experience showed that AI can be a conduit of bias, but evidence also supports the conclusion that this technology can be deployed to guard against unconscious bias in hiring decisions.⁷¹ Companies interested in reducing unconscious bias in hiring can

65. MODEL RULES OF PROF’L CONDUCT r. 5.1(c).

66. *Id.* r. 5.2(b).

67. *Id.* r. 5.1 cmt. 2.

68. Compliance work, for example. When a supervisor assures a supervised lawyer that a particular datum need not be disclosed or reported to regulators because it is too isolated, in effect a trivial fluke, a few clicks into deep learning might confirm or refute that conclusion.

69. A burgeoning literature addresses bias in artificial intelligence. See Chris Goodman, *Impacts of Artificial Intelligence in Lawyer-Client Relationships*, 72 OKLA. L. REV. 147 (2019); Raub, *supra* note 41, at 533-42. Endorsements of artificial intelligence as an anti-bias technology are rarer. For an example from a field other than professional responsibility, see Arthur Rizer & Caleb Watney, *Artificial Intelligence Can Make Our Jail System More Efficient, Equitable, and Just*, 23 TEX. REV. L. & POL. 181 (2018).

70. See *supra* Section III.A.

71. Jason Bloomberg, *Bias Is AI’s Achilles Heel. Here’s How to Fix It*, FORBES (Aug. 13, 2018 9:40 AM), <https://www.forbes.com/sites/jasonbloomberg/2018/08/13/bias-is-ais-achilles-heel-heres-how-to-fix-it/#18f3e2b76e68> (quoting Joy Buolamwini, graduate researcher at MIT Media Lab and founder of Algorithmic Justice League and Code4Right)

now choose among several different programs that remove names, photos, schools, markers of someone's age, and gender-specific pronouns in an effort to reduce various forms of bias.⁷² Programs have the power to nudge human resources departments in the progressive direction that businesses choose to take.⁷³ Lawyers, many of whom who are employers and employees, can take advantage of a burgeoning opportunity already present in their offices.

7. *AI as defender.* Thus far my review of artificial intelligence has addressed its potential to push lawyers to do more and better rather than to shelter them from repercussions. Here I add a note of what in another context I've called condoned self-regard.⁷⁴ The Model Rules condone self-regard most notoriously in their exceptions to confidentiality, permitting lawyers to reveal confidential information to establish a claim or defense in connection with their representation of a client.⁷⁵ Liberal entitlement to spill secrets exists when the client did nothing to disturb or threaten the lawyer, and even when revelation would inflict injury on a client. The application of AI endorsed here as defender of attorneys has a gentler impact on clients. Using it to serve lawyers' interests would on some occasions be desirable, I think, even when this move provokes or offends someone else.

Artificial intelligence could refute a set of accusation scenarios by gathering verifiable facts. Charged with discrimination in violation of Rule 8.4(g), for example, a lawyer could deploy machine learning to retrieve data about her exemplary conduct with respect to persons identified as members of one or more eleven protected classes named in the Rule. Just as future artificial intelligence can intersect with the excessive-fee prohibition in Rule 1.5 by putting pressure on a lawyer to bill for less time on the clock,⁷⁶ it can also, for another example, document the challenging or demanding nature of completed work and thereby justify a hefty bill in the face of client protest. Artificial intelligence could also help counter a complaint that looms large in disciplinary annals, the accusation that a lawyer neglected a client or failed

("We can start thinking about building platforms that can identify bias by collecting people's experiences like the ones I shared, but also auditing existing software. We can also start to create more inclusive training sets.")

72. Rebecca Greenfield & Riley Griffin, *Can Artificial Intelligence Take the Bias Out of Hiring?*, BOS. GLOBE (Aug. 12, 2018), <https://www.bostonglobe.com/business/2018/08/12/can-artificial-intelligence-take-bias-out-hiring/SXVO2h7eYeQArnpj0kPtL/story.html>.

73. C. Erika Morphy, *Can Artificial Intelligence Weed Out Unconscious Bias?*, CMSWIRE (Feb. 13, 2018), <https://www.cmswire.com/digital-workplace/can-artificial-intelligence-weed-out-unconscious-bias>.

74. ANITA BERNSTEIN, *THE COMMON LAW INSIDE THE FEMALE BODY* 31, *passim* (2019).

75. MODEL RULES OF PROF'L CONDUCT r. 1.6(b)(5) (AM. BAR. ASS'N 2018).

76. *See supra* Section III.C.3.

to communicate.⁷⁷ Human memory might not recall all the texting and emailing and social media-ing the lawyer devoted to the client, but machines at the office have the goods and can inform.

IV. Concluding Thoughts on Implementation

The three preceding Parts discussed gap filling as a professional responsibility imperative, locating this practice first in the Model Rules and then in the daily lives of lawyers. They gave examples of how lawyers can use artificial intelligence to address omissions and lapses in their work. Now comes the last step of the Article: putting the recommendation into operation.

Continuing legal education (CLE) on ethics and professional responsibility can facilitate gap filling. Only the Multistate Professional Responsibility Examination unites more lawyers than CLE as a shared experience of occupational regulation: as a general rule, lawyers in the United States must continue regularly to learn, or at least be exposed to, unfamiliar ethics/professional responsibility material as a condition of keeping their licenses.⁷⁸ All jurisdictions free a few categories of lawyers from the requirement (I am among the exempted population in New York), but a large majority of license holders live under the burden.⁷⁹ As a nearly universal criterion for remaining in good occupational standing, CLE tells lawyers to refresh and upgrade their commitment to professional responsibility.

An online essay has complained that refreshing and upgrading does not get honored in practice: “I loathe continuing legal education (CLE) classes. Inevitably, you’re sitting in a conference room, passively listening to some lawyer (likely a white male), talking or reading from his notes. Behind him

77. Edward Kinkeade, *The Top Ten Reasons Clients File Grievances Against Their Lawyers*, 5 TEX. WESLEYAN L. REV. 35, 35-36, 40 (1998) (discussing the prevalence of neglect and failure to communicate in clients’ complaints to the Texas Bar).

78. Only five jurisdictions—the District of Columbia, South Dakota, and three states that start with M: Maryland, Massachusetts, and Michigan—do not impose CLE as an ongoing obligation for licensed lawyers, and every jurisdiction that requires CLE includes professional responsibility as a category in which lawyers must continue their education. See *CLE Credit for Pro Bono*, AM. BAR ASS’N, https://www.americanbar.org/groups/probono_public_service/policy/cle_rules/ (last visited May 4, 2019) (listing which subjects are required and how often lawyers have to complete these minimum credit hours). These conditions could change, of course—but having taught and kept an eye on ethics CLE for decades, I can say that once installed, this requirement doesn’t get dropped from regulators’ demands.

79. Rima Sirota, *Making CLE Voluntary and Pro Bono Mandatory: A Law Faculty Test Case*, 78 LA. L. REV. 547, 552-53 (2018).

is the screen with PowerPoint presentation slides with way too much text.”⁸⁰ Keep reading “Why Do CLEs Suck So Badly,” and the criticism gets more pointed:

[W]e’re still using teaching techniques from the industrial revolution age. Sitting in a classroom and passively listening has been shown to be one of the worst ways to teach and learn. Everything we know about adult learning shows that we learn best by *engaging* with the materials. We learn best when we take the material, apply it, and meaningfully digest it in some way.⁸¹

Gap filling as a professional responsibility exercise can fill this gap in continuing legal education. Being lectured by a suit standing in front of a slideshow that both (both suit and slideshow, I mean) are more often than not dreary to look at is not necessarily a poor use of time, but lawyers could learn at least as much as what they now learn from traditional CLE by considering actively what might be missing in the heed they pay to their obligations. By requiring lawyers to compose and submit a document containing words, the proposal offered here aligns with the pertinent provision in a 2017 ABA model rule that governs continuing legal education.⁸²

Now, a sketch of how the exercise might proceed.⁸³ The participant would reflect on a rule of professional conduct that is in effect where she practices law or has been proposed as a new rule. She must choose a provision that relates to the work she currently pursues or that is pursued in her place of employment. For example, an associate in a firm can help herself to the jurisdiction’s counterpart of Model Rule 5.1 no matter what she or the firm does, but may choose Model Rule 3.8 only if she is working as a prosecutor, has accepted a job offer in this new line, or was just elected district attorney. The exercise emphasizes professional responsibility in practice rather than as theory or academic ideal.

80. Jeena Cho, *Why Do CLEs Suck So Badly?*, ABOVE THE LAW (Aug. 8, 2016, 3:31 PM), <https://abovethelaw.com/2016/08/why-do-cles-suck-so-badly/>; see also Sirota, *supra* note 79, at 548 (calling mandatory CLE “a self-perpetuating industry” that functions mainly to extract “hundreds of millions of tuition dollars for course purveyors”).

81. See Cho, *supra* note 80.

82. Here I hew to its spirit rather than its letter. See *Model Rule for Minimum Continuing Legal Education*, AM. BAR ASS’N § 4(D), at 8 (Feb. 2017), https://www.americanbar.org/content/dam/aba/directories/policy/2017_hod_midyear_106.pdf (“Thorough, high-quality instructional written materials which appropriately cover the subject matter must be distributed to all attendees in paper or electronic format during or prior to the program.”).

83. At this early stage it certainly has gaps, but gaps are part of my point.

Toward this end, the participant would supply information about how her office routinely operates with respect to the rule in question, keeping mindful of the role of the exercise as gap filler and education. Her job here is to think about the potential for deep learning or a Clippy-like online assistant to strengthen compliance with a rule. I note the limits of what I propose. If the lawyer is wondering whether a course of action she is considering for herself comports with rules of professional conduct, that question ought to go to the bar or an established source of help like an ethics hotline. This occasion of education is not the time or place to report a rule violation by another lawyer,⁸⁴ nor to inquire whether a lawyer has done something wrong in the past.⁸⁵ Instead, the exercise sets up an inquiry: *We [or I] have to comply with Rule X. Conditions Y and Z could be associated with forgetting something important or committing another inadvertent error. I now consider an idea for possible change using artificial intelligence as a potential source of improvement in this work.*⁸⁶

84. MODEL RULES OF PROF'L CONDUCT r. 8.3 (AM. BAR. ASS'N 2018).

85. When I served on the New York City Bar ethics committee, a group of volunteers whose members committed themselves to spending two workweeks a year answering professional responsibility queries from lawyer-callers (several such hotlines exist in New York), I was instructed to provide only "guidance concerning the caller's *own prospective* conduct [and] not answer questions about past conduct or the conduct of other lawyers." *Ethics Hotline*, N.Y.C. BAR, <https://www.nycbar.org/member-and-careerservices/ethics/hotline> (last visited May 14, 2019). I regard these constraints as desirable for a Mind the Gap ethics CLE proposal.

86. Commenting on an earlier version of this Article, Alice Ristroph broached the possibility of gaps in the practice of law for which artificial intelligence is the opposite of a solution:

One risk is a risk of lost skills: as we develop technology to do accomplish tasks for us, we tend to forget how to do the task ourselves. With a calculator on every phone, people forget (or never learn) to do simple mathematics themselves. I wonder if there are typical lawyering tasks that can be accomplished much more efficiently by a machine, but then human lawyers will forget how to accomplish those tasks themselves. The other risk is a lost sense of responsibility: will increased reliance on AI lead to a world in which human lawyers disclaim responsibility for legal outcomes?

E-mail from Alice Ristroph to Anita Bernstein (June 18, 2019) (on file with author). This comment, to my mind, pertains to this Symposium in general and falls within the proposal of this Part in particular. I would give lawyers CLE credit for identifying an application of artificial intelligence used in their work that they argue ought to be checked by, or supplemented with, human attention. Here the gap lawyers would be minding relates to the skills that their practice or their clients need. (To them I add: Specifics please, not just diffuse anxiety about the rise of machines, before I'll approve credit for the exercise.)

Information needed to follow the exercise could be sensitive or even implicate confidentiality, and so the lawyer should write this document without attaching her name or the name of her firm to the file she submits. Regulators who receive the form would know that information, but the document would omit it. As a general rule the participant also ought to redact identifying details that are not necessary to make the description intelligible.⁸⁷ If she cannot describe the rule-compliance issue without including information that she ought not reveal, then she needs another source of credit for CLE. The regulator who receives her submission would manage a second increment of CLE credit.

For this second round, another lawyer, preferably someone not acquainted with our original participant, would receive a copy of the memo described above. This second lawyer's job would be to review the description with attention to whether the practice-pattern in it fits the mandate of the exercise, and then to write a short opinion on whether the author, whose name and place of employment the second lawyer would not know, should receive CLE credit for the exercise. This review would not just say yes or no: it would identify elements of the pattern that implicate a rule of conduct and would respond by assessing the improvement ideas proposed. Participant #1 would at her election receive a copy of this review, but in the ordinary course of this exercise would not learn the name of the reviewing lawyer. The reviewing lawyer would obtain CLE credit. Submissions from both lawyers would be filed with a short affidavit stating that lawyers prepared their memoranda themselves and vouching for what they wrote.

A little more on administration: This version of Mind the Gap ought to start its life as a pilot program available to only a minority of lawyers holding a license in the jurisdiction, a launch that would permit learning from trial and error. Were I in charge, a lawyer could receive professional responsibility credit for this exercise in the same role once every three years or so; more often would weaken the improvement effect.⁸⁸ Quantities of CLE credit

87. Suppose for example the lawyer chooses to focus on artificial intelligence as risk reduction for positional conflicts in her practice. *See supra* notes 61-64. In a not-so-brilliant application of artificial intelligence, by which I mean a low-tech possibility, this lawyer could identify nouns present in documents prepared in aid of the firm's Position 1, a stance in potential conflict with Position 2. To keep client identity out of the document the lawyer could substitute pseudonyms for real names while keeping terms of her pursuit that do not identify clients—for example "monopoly," "FINRA," "wage and hour," "depreciation"—and that make her point about positional conflicts at a general plane.

88. In my scenario the every-three-years limit would apply to the segment of the exercise that the lawyer performs. For example, if a lawyer got CLE credit for writing a Mind the Gap memo in year 1, he could get CLE credit for doing the reviewing half of the job in year 2, but

awarded should be calibrated to make the undertaking worth checking out for a venturesome lawyer without being so large that it preempts more established modes of continuing education.

* * *

Using artificial intelligence to fill gaps in the practice of law is simultaneously a small idea and a big one. This Article discussed two applications, one the general category of machine learning and the other an animated pop-up described with a bit of eye-rolling. Both are well established, and both are modest in relation to artificial intelligence of the future. There's the smallness. Though anticipating a different world ahead, I confined my recommendations for lawyers mostly to what machinery already in place can do.

The bigness of the idea is the wide swath of what it seeks to achieve. Similar in this respect to historical revisions of the Model Rules of Professional Conduct that identified problems in need of regulatory attention, applying artificial intelligence to spot omissions and inadvertence in the work of lawyers enlists members of this profession in the work of improvement. Here as elsewhere, human experience makes artificial intelligence more useful to human beings.

not for writing another memo about his own office until year 4 rolled around. The same lawyer who wrote a review memo in year 2 could not get CLE credit for writing another review memo until year 5.