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The Influence of Algorithms: The Importance of Tracking Technology as Legal Educators

By Brian Sites



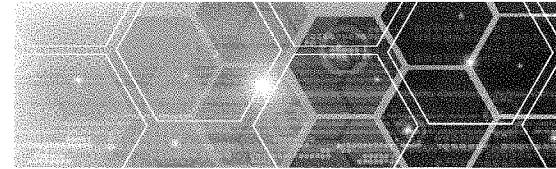
Introduction

In many ways, legal research, analysis, and writing are today much like they have been for an age. We still seek to persuade in our documents; we still seek answers to research questions with the help of Westlaw and other assistants; and we still teach our students the importance of writing clearly and accurately. Today is as it was yesterday; it would be easy to take our rest tonight, confident that the same will be true in the morning.

But today is not quite like the days before it: the technological feats that surround us increasingly distance us from prior eras. The world of Tomorrow will offer challenges not unlike today's, but they will be challenges tackled with new tools including apps, web-based platforms, and other software. It is essential that legal educators, as guides to students who live in an era of great technological change, stay abreast of the most important of such developments. This is not a new role for any who saw first-hand the change that electronic research and other innovations brought, but that change is not over. "Tomorrow," whenever it arrives, will bring new tools, and that Tomorrow is the topic of this essay.

First, let's be clear about what this essay is not: it is not about attorneys being replaced en masse by computers and algorithms. Even assuming that is possible, the wind carries no hint of such a storm arriving soon. If it does happen, attorneys and other professionals who fill jobs that are resistant to automation—because the jobs require creative thinking, flexible analysis, prediction, identification of unspecified problems, and other skills that are difficult to reduce to software coding—will likely face that problem after numerous other employment sectors are overrun and, as a result, after we as a society have faced that quandary on a larger scale. Attorneys today might be lampooned as too robotic and heartless, but by the time the Tin Man arrives from Oz to take our jobs, the yellow brick road will have faded to gray.

But that is the beginning of the story, not its end. New technologies on the horizon will encroach on tasks central to being an attorney, not the least of which is legal research. For example, IBM's Watson, the computer that roundly defeated our best Jeopardy! contestants in 2011, has been taught to do legal research through a project called ROSS. ROSS mines over one billion text documents per second based on your questions—which need not be posed through Boolean keywords or phrases—and points you to key legal sources. Or, as ROSS CEO Andrew Arruda explained in our interview, it's like working with "an army of associates" or talking "to a senior partner ... who is always happy to hear from you, always happy to talk to you." ROSS's leaders



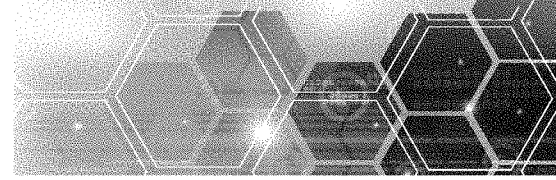
describe the platform as “fully functional, working, [and] it’s just a matter of [scaling].” As this article goes to press, ROSS, “the world’s first [AI] attorney,”¹ has already been hired by several major players, including BakerHostetler, Latham & Watkins, vonBriesen, and Dentons.

ROSS is not designed to replace lawyers, but instead to help them. ROSS “puts everything you need right in front of you. [It’s about] making lawyers’ lives better, augmenting and complementing [attorney work].” You pose a question to ROSS in natural language, and it returns answers in the form of snippets from relevant cases, statutes, regulations, and so forth. But behind the scenes, ROSS has done its homework. As ROSS CTO Jimoh Ovbiagele explained, “ROSS understands the context of the answer; even though it’s returning to you just a small part of a legal document that answers a question, [ROSS] has verified it in other documents, and [some of] those documents are returned as well.” With those cases and other excerpts, an attorney potentially cuts through the forest of legal research and gets right to the trees worth finding. If ROSS can deliver on these promises (and at a price that is accessible), it could be just what it purports to be: “the future of legal research.”

Even in a world without ROSS, improved legal research through enhanced algorithms and computing is inevitable. But this marks not the end of human-powered lawyering, only its continued evolution. ROSS and other such programs will still, at least for some time, require human assistants. Someone must know what questions to ask, ask them, and then act upon the results. However, these programs should be important to us as legal educators precisely because people will need to ask the questions—the people we teach in class every week. Someone must “ask” Westlaw or Lexis the right “question” too, but neither of them were unimportant developments in legal research. Nor is Boolean searching unimportant simply because the connectors must be used correctly. A law school research course that wholly ignored electronic research ten years ago would have been incomplete. A course that ignores algorithm-assisted legal research Tomorrow will be similarly situated.

We need not look to the future for proof: algorithms have already reshaped society. The power of Google’s search algorithm has put information at our fingertips in a way that reshaped research on a global scale. Algorithms are widely given decision-making authority everywhere from the mundane (deciding what notifications to push to your digital device, as in Google Now cards) to the major (deciding when to engage in financial transactions and then doing so, or helping match you on dating sites) and on up to the life-altering (sequencing traffic lights and air traffic, and deciding whether to engage a vehicle’s brakes without the operator’s consent, such as when Subaru’s EyeSight or Volvo’s City Safety algorithms determine a collision is imminent). None of these are semi-automated legal research. None of these fundamentally change what an attorney does. But all of these technologies show the incremental power and influence of algorithms in our

¹ See, e.g., 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/>.



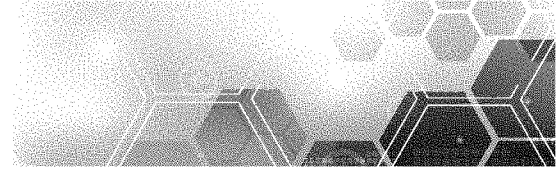
everyday lives. Baby steps become miles with time, and they have already been walking for decades.

Before we indulge too deeply in lawyer exceptionalism and protest that lawyers won't be affected, remember that we already know the practice of law is not immune to the influence of technological developments. It has already happened. Again, the influence has ranged from the minor (electronic calendaring, case management programs, and billing software) to the major (email, social media, and electronically stored information) to the practice-altering (the internet as a whole, electronic research options like Westlaw and Lexis, and e-discovery). Market forces will continue to drive innovation to make the practice of law faster and more accurate. That means more technology and more change. And innovation will come not only from the familiar industry players—websites like Kickstarter.com and other crowdfunding options show that a good idea in anyone's hands today can be a gateway to a new product or service Tomorrow. As law professors, we must be mindful of these changes.

That is all that this essay purports to say: to prepare our students for the future, we must track what it will contain and adjust our courses accordingly. It is easy, in the wash of life and teaching and writing and—ugh, grading—to pay little mind to the gadgets of the month. We need not track most of them. But innovations like ROSS could be central to what we do. And other developments might be as well, including: crowdsourced research tools like Casetext; alternative research platforms like Lois Law, Versus Law, TheLaw.net, Google Scholar, and Casetext again; new search tools like data visualization, such as on Ravel, Fastcase and LexisNexis; writing tools like Scrivener; and so on.

For example, with sites like Casetext, attorneys can approach legal research from a community-based approach. “Legal research shouldn't be a solitary endeavor,” Casetext CEO Jake Heller advocates; “you should be able to tap into others' expertise.” That's precisely what Casetext aims to facilitate by empowering users to see how often specific sentences in a source have been cited and linking to how that source is discussed by others on blogs, etc. Heller calls this “a deep dive ... at your fingertips.” And these tools are not necessarily incompatible—Casetext aims to complement machine-based research tools like ROSS. “[Big data sites] are a tool, but like building a house, you need more than a hammer.” Indeed, Casetext has expanded to offer its own “automated research assistant,” CARA (Case Analysis Research Assistant), which uses a brief you upload to identify additional case law that “you or opposing counsel may have missed.” With these offerings, Casetext is well on its way towards the company's goal of “mak[ing] all the world's law free and understandable.”

Even traditional legal research is being enhanced with new search tools, including data visualization. On sites like Ravel Law and Fastcase, users can view their search results in a visual map that shows, among other things, the web of connections between your source and other



sources (an especially useful tool for visual learners generally and all students learning the nature of case connections). Westlaw has also added new visual features.

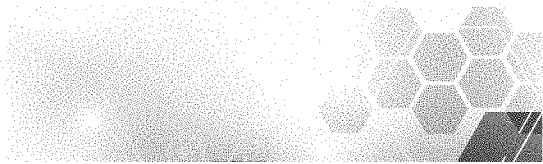
And some other projects will be of interest to us to assist in the educating process even if students will not use them in their jobs. One such example is LearnLeo.com, where students preparing for law school can learn how to read and analyze cases through a series of free tutorials and then, while in law school, use the site to brief cases. LearnLeo is also tailored for today's students, as much of the tutorials and site design are based on learning methods favored by millennials. A wide proliferation of subject-matter-based apps are similarly important and increasingly attempt to help consumers write contracts and wills, buy real estate, and answer tax and other subject-matter-specific questions; this list will only grow.

Time will tell how these efforts fare and whether they earn a place in our curriculum, but it is critical that we as educators track these technological innovations and, when they are significant, learn to use them as best we can. If we do not, we cannot train our students to use the tools they are actually likely to use. To fully succeed at our task, we must track technology that both has already shaped what it means to be an attorney (litigation, transactional, or otherwise), and that is a new product that is likely to do so Tomorrow.

These are significant challenges. However, there are many paths to learning about these tools, including: (1) attending law and technology shows hosted by the American Bar Association, state Bar associations, and private trade groups; (2) perusing law practice management magazines, newsletters, and similar publications; (3) following law and technology blogs; (4) participating in professional groups, like the Institute for Law Teaching and Learning; and (5) obtaining training in new technologies through CLE courses. These options, particularly attending tech shows and conferences, can help both with tracking technology and learning to use the new tools in a hands-on environment.

None of this necessarily means that the old tools and methods will be obsolete. We are now more than two decades into electronic research, and print research still has a place in the law school curriculum. Nor will all new technologies warrant attention from legal educators. But to recognize those that do, we must first know the new technology exists and recognize its value. And to do that we must track it. That conclusion should be second nature as legal educators: we already live with one foot in the future because we seek to teach students skills we hope they will use years down the line. We're already training students to live in Tomorrow; why not also pay attention to what that life will require?

Whenever "Tomorrow" arrives, none of these things will probably come to pass in the day after today (or the week after that, or the months after that). And lawyers engage in many tasks that will resist algorithmic encroachment, while still other things we do might never be reduced to so



many lines of code. But we are not so exceptional as to buck the automation trend forever. Yes, attorneys will be safe for longer than some, but we will feel the pinch long before Siri is writing a subpoena. Just like legal research, discovery, document review, and office management have been and continue to be shaped by software and technology in recent decades, the same will happen with other tasks lawyers perform.

To stay true to our goal of educating and preparing students for the jobs they seek Tomorrow, we must be cognizant of what it will bring, including its technology. We are not alone in that responsibility—we share it with the students’ future employers, Bar associations, professional groups, and the students themselves. But we must do our part by tracking significant new technologies, adjusting our courses as needed, and instilling in our students at least a limited technological awareness. If we do so, we can take our rest knowing that even if Tomorrow is not like today, our students know what it might bring and will have their eyes on the horizon at dawn as well.

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