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TRANSACTIONAL ARTIFICIAL INTELLIGENCE

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Abstract

Artificial intelligence (“AI”) impacts the practice of law. However, discussions about the impact of AI are often focused on litigation practices. This article will discuss how AI influences transactional practices, including corporate, trust and estate, and real estate (to name a few). This article will discuss the intersection of AI and transactional work in three ways. First, this article will discuss transactional AI and provide two dozen examples of transactional AI tools. Second, this article will describe how transactional AI tools can assist transactional attorneys in accomplishing efficiency and scale in their billable and pro bono work. Finally, this article will detail how law schools can prepare students to use transactional AI tools, including in first-year courses, such as legal writing courses, and upper-level courses, such as transactional clinics.

* Assistant Professor of Legal Writing, Suffolk University Law School, Boston, Massachusetts. Thank you to the Legal Writing Institute for their leadership on bringing topics related to AI to the forefront, including the Symposium on Artificial Intelligence and the Legal Profession, from which this article was born and from which many of the themes and tools described herein were discussed. Many of the themes and tools discussed here are also discussed in my other work, including in my articles *Transactional Drafting with Donna, Google, and Cooley: Leveraging Technology Tools in a Time of Online Learning*, 28 PERSPS. 47 (2020) and *Transactional Technology*, 23 TENN. J. BUS. L. 361 (2022). Thank you to my colleague and friend, Professor Dyane O’Leary, for reviewing and commenting on this article. Thank you to my research assistant Grace Barlow Enchill for her important and diligent assistance. Finally, thank you to Suffolk University Law School for supporting this project.

Introduction

I first saw it on Twitter. In 2017, a doctor and a baker repurposed artificial intelligence (“AI”) originally designed to categorize types of breads and pastries to identify cancer cells in humans.¹

It all started in 2007 when a bakery was struggling to train its cashiers in classifying pastries, remembering their prices, and ringing up customers promptly. To solve the problem, the baker engaged an AI firm to build a tool to scan and recognize the bakery’s wide array of pastries, insert their price, and ring up the customer in a timely and efficient manner (without the need for the cashier to touch or individually price the pastries). The baker spent thousands on research and development, eventually deploying the tool in 2013. In 2017, a doctor saw an ad for the baker’s AI tool and noticed how similar pastries are to cancer cells—often misshapen, unique from one another, and difficult to categorize. The doctor got in touch with the baker and made a few tweaks to the bakery’s algorithm; thereafter, the tool was successfully repurposed to identify cancer cells.

This example illustrates the power of AI, including its ability to replace human thinking and discernment.² While AI used in the legal profession may never cure cancer, legal AI can improve processes and deliverables, often helping attorneys do their work more efficiently and with greater scale. While much has been written about the power of AI in the legal profession, especially regarding the power of AI in litigation settings, little has been written about the power of legal technology and AI in transactional settings.

This article discusses several AI tools relevant for transactional attorneys, how such tools impact daily practice, and how such tools can work for the greater good. Section I provides a brief background on AI used in connection with the law and introduces the reader to some transactional AI tools. Section II discusses the importance of transactional AI tools, including how such tools can affect an attorney’s daily practice and how those same tools can provide powerful assistance in serving communities, including through pro bono work. Finally, Section III addresses how transactional AI can be incorporated into the

¹ James Somers, *The Pastry A.I. That Learned to Fight Cancer*, THE NEW YORKER (March 18, 2021) <https://www.newyorker.com/tech/annals-of-technology/the-pastry-ai-that-learned-to-fight-cancer> [<https://perma.cc/E3UA-QQX7>] (last visited Feb. 11, 2022).

² Because this article is a part of a special issue of *Legal Writing: The Journal of the Legal Writing Institute* dedicated to AI and readers are assumed to have general familiarity with the topic of AI generally, this article aims to discuss AI in the legal field specifically and does not aim to provide a full background into the history of AI. Various sources identify AI generally and AI in the legal field. *See generally* GABRIEL H. TENINBAUM, *PRODUCTIZING LEGAL WORK: PROVIDING LEGAL EXPERTISE AT SCALE* (Aspen 2022).

law school curriculum to teach students the importance of transactional AI.

This article views transactional AI with a wide lens, including a discussion of AI tools that replace human thinking and discernment and AI tools that do not (but one day may). This discussion of transactional AI includes both sophisticated AI tools (including those within the traditional scope of AI discussions), such as document mining and benchmarking tools, and also less sophisticated AI tools (including those that may not traditionally be considered AI), such as basic document assembly tools. While some may consider aspects of these less sophisticated technologies short of true AI, this article includes a broader discussion of AI because some less sophisticated tools serve as the starting point of more sophisticated AI. By teaching students about elementary AI building blocks (including in first-year courses), professors can establish important building blocks that students can expand upon in future coursework or practice.

I. Artificial Intelligence in the Law

AI is a hot topic in many industries today. In the legal profession, AI has been debated, analyzed, and discussed for decades. Despite some hesitancy to use AI in the profession, however, data suggests that many are using it in their legal practice today. According to a recent ABA survey, 26% of attorneys in firms with over 100 attorneys use AI-based technology.³

To understand some basics of AI, this section will introduce readers to AI used in legal practice today. In addition, this section will introduce readers to transactional AI, including specific AI tools used in transactional practices.

A. Artificial Intelligence Today

Nearly a decade ago, predictions regarding the future of AI indicated that legal AI would dramatically change five areas of legal practice in the “near future”: 1) discovery, 2) legal search, 3) document assembly, 4) brief and memoranda generation, and 5) prediction of case outcomes.⁴ A decade later, these predictions are accurate. Today,

³ *ABA Releases 2019 TECHREPORT and Legal Technology Survey Report on Legal Tech Trends*, ABA (Oct. 23, 2019), <https://www.americanbar.org/news/abanews/aba-news-archives/2019/10/aba-releases-2019-techreport-and-legal-technology-survey-report/> [https://perma.cc/CZM5-DDZZ] (last visited Apr. 12, 2022).

⁴ See, e.g., 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 (2014) (predicting ways in which the authors expected AI to impact the legal profession in the future).

attorneys and law students use legal AI in discovery, legal research, document generation (for litigation and transactional matters), and prediction of case outcomes. Attorneys and law students use AI in a variety of other contexts as well: due diligence, predictive coding, contract management and analytics, and law office management, among others.

While the predictions described above closely mirror the current state of legal AI today, many considerations and cautions persist about AI, including those related to its proper use. While many agree that attorneys are not at risk of being replaced by legal AI, many also agree that attorneys need to learn how to properly use AI to meet the ethical obligations set forth by the profession itself and to better serve clients.⁵

1. Transactional Artificial Intelligence

Technological advances in drafting software have long informed transactional work. Such advances began with word processing systems that allowed the mass production of documents and the easy transferability of text from one document to another. Today, technology advances allow for document automation, facilitating the efficient creation of documents. Especially important in practices that involve both high-volume and routine documents, technological advances have greatly aided many transactional practices where future contracts and documents closely resemble existing ones.⁶ Among others, these technological advances are particularly important for practices involving real estate leases, real estate conveyancing documents, customer and supplier agreements, wills, trusts, and divorce agreements.

In more recent years, an explosion of technological advances has increased AI's impact on the drafting of legal documents, including for transactional attorneys. Expanding beyond simple technology advances, however, transactional AI does more. Although there are many uses for transactional AI, this article will address three that have the greatest potential to impact the practice of law. First, transactional

⁵ See Dyane L. O'Leary, "Smart" Lawyering: Integrating Technology Competence into the Legal Practice Curriculum, 19 U.N.H. L. REV. 197 (2021); MODEL RULES OF PRO. CONDUCT r. 1.1 cmt. 8 (AM. BAR ASS'N 2021) (describing the ethical rules in keeping abreast with the benefits and risks associated with technology used in legal practice).

⁶ Kathryn D. Betts & Kyle R. Jaep, *The Dawn of Fully Automated Contract Drafting: Machine Learning Breathes New Life into a Decades-Old Promise*, 15 DUKE L. & TECH. REV. 216, 220 (2017) (discussing how certain types of automated drafting, including through transactional AI tools, can assist attorneys in efficiently drafting legal documents that contain many similar provisions or otherwise resemble previous similar documents).

AI fuels document assembly tools that allow for the drafting of documents through forms and databases that use “if-then” decision-tree logic technology.⁷ Second, transactional AI powers document mining and benchmarking tools that identify and compare documents and contractual provisions. And third, transactional AI drives document revision and analysis tools by analyzing drafted language with transactional considerations in mind to evaluate textual use and effectiveness.

a. Document Assembly Tools

Document assembly tools can help a drafter generate a new document with greater ease, efficiency, and precision. Basic document assembly tools gather high-level information from a user and generate an initial version of a transactional document using standard language. These tools rarely are considered AI, since they are more of a “fill-in-the-blank” document, similar to how one fills out a standard waiver with their name, date, and signature.

While basic document assembly tools rarely are considered AI, dynamic document assembly tools should be. Dynamic document assembly tools go beyond basic document assembly tools and are sophisticated tools that utilize technology to identify what additional information is needed and what other questions the tool must ask the user. In these dynamic document assembly tools, users⁸ can generate an initial draft of a legal document by providing inputs and responding to questions or prompts designed to generate a customized transactional document. The inputs provided by the user inform the information inserted into the document (e.g., a property address in a residential real estate lease), and the user’s answers to specific questions or prompts determine whether the tool generates additional provisions or needs additional information (e.g., a question regarding whether the tenant has a pet may determine whether a “Pet Addendum” is added to a residential lease and whether additional information, such as the type, breed, and weight of the animal, must be collected).

One example of a basic document assembly tool is CooleyGo,⁹ a free resource from the international law firm Cooley LLP. CooleyGo is

⁷ See generally William E. Foster & Andrew L. Lawson, *When to Praise the Machine: The Promise and Perils of Automated Transactional Drafting*, 69 S.C. L. REV. 597 (2018) (describing how automated drafting can use sophisticated decision-tree logic that customizes each document based on initial information inserted and then the response to each question).

⁸ Including either a client, an attorney, or a paraprofessional working under the direction of an attorney.

⁹ CooleyGo, <http://www.cooleygo.com> [<https://perma.cc/8VVL-3ATJ>] (last visited Apr. 10, 2022). CooleyGo is a product of international law firm Cooley

designed as a free legal resource for entrepreneurs and covers many topics related to such work, including entity formation, intellectual property, and employment matters.¹⁰ CooleyGo allows users to identify a form or transactional precedent,¹¹ insert some basic information about a potential client, and download an initial transactional document.¹² While this tool is a basic (and not dynamic) document assembly tool, it serves as a starting point and lays the foundation for more dynamic document assembly tools.¹³

There are a variety of dynamic document assembly tools that expand beyond the basic.¹⁴ Specifio¹⁵ uses information from users to

LLP and was designed primarily for entrepreneurs. The site includes both educational materials and document assembly tools.

¹⁰ *Id.*

¹¹ Transactional precedent refers to forms, exemplars or model provisions or entire agreements that transactional attorneys use to draft documents. Some transactional precedents are internal and are stored on internal databases. These often serve as a starting point for transactional attorneys when they are drafting similar documents for a new client or a new matter. Transactional precedent can also refer to external documents or provisions, such as those that were drafted by other attorneys for other matters, and may be available to attorneys on publicly available sources, such as EDGAR. Transactional attorneys may choose to use external transactional precedent to determine what is “market” or “standard” for their client to request from the other party to a transaction. *See generally Transactional Law Research: What Are Precedents?*, STANFORD LAW SCHOOL, <https://guides.law.stanford.edu/c.php?g=646860&p=4534399> [<https://perma.cc/B78S-E8BA>] (last visited Mar. 17, 2022).

¹² *See* CooleyGo, *supra* note 9.

¹³ Many other law firms and associations have similar document generators or forms libraries. Wilson Sonsini has a term sheet generator. *Emerging Companies*, WILSON SONSINI GOODRICH & ROSATI, <https://www.wsgr.com/en/services/practice-areas/corporate/emerging-companies.html#term-sheet-generator> [<https://perma.cc/GF2G-PEY9>] (last visited Jan. 27, 2022). Orrick similarly offers a start-up forms library. *Startup Forms Library*, ORRICK HERRINGTON & SUTCLIFFE LLP, <https://www.orrick.com/en/Total-Access/Tool-Kit/Start-Up-Forms> [<https://perma.cc/KN4Z-7946>] (last visited Jan. 27, 2022). The National Venture Capital Association (NVCA), in partnership with Aumni, also offers model documents. *New Enhanced Model Term Sheet v2.0*, AUMNI, <https://www.aumni.fund/resources/enhanced-model-term-sheet> [<https://perma.cc/Y3KT-ACYS>] (last visited Jan. 27, 2022).

¹⁴ David Hricik, Asya-Lorraine S. Morgan & Kyle H. Williams, *The Ethics of Using Artificial Intelligence to Augment Drafting Legal Documents*, 4 TEX. A&M J. PROP. L. 465, 469 (2018) (describing the use of specific tools to automate the drafting of legal documents).

¹⁵ Specifio, <http://www.specifio.io> [<https://perma.cc/6WNB-MRGB>] (last visited Feb. 11, 2022). Specifio assists users in the automatic drafting of software patent applications.

draft a patent application, complete with drawings. Leaflet¹⁶ allows users to dynamically create legal documents, including incorporation documents and deal documents, using information from clients and repositories specific to different practices, transactions, and client industries. And finally, TheFormTool¹⁷ creates an entire suite of documents at once, helping drive efficiency for attorneys who work with a variety of interconnected documents used throughout a deal or at one closing. In addition, there are many other similar tools, including Pathagoras,¹⁸ Woodpecker,¹⁹ Contract Express,²⁰ HotDocs,²¹ Lawyaw,²² Pathagoras, and XpressDox,²³ among others.²⁴

b. Document Mining and Benchmarking Tools

Document mining and benchmarking tools help inform drafting choices. With technology that stores, recognizes, and evaluates the contractual language of a document, users can compare contract provisions to identify differences in language, find new provisions for

¹⁶ Leaflet, <https://leafletcorp.com> [<https://perma.cc/6RXA-LW7P>] (last visited Feb. 11, 2022).

¹⁷ TheFormTool, <https://www.theformtool.com> [<https://perma.cc/VKY6-DRG6>] (last visited Feb. 11, 2022).

¹⁸ Pathagoras, <https://pathagoras.com> [<https://perma.cc/67X3-LPZ7>] (last visited Feb. 11, 2022). Pathagoras is a document assembly system that also allows users to generate information about similar clauses across a library of documents.

¹⁹ Woodpecker, <http://www.woodpeckerweb.com> [<https://perma.cc/A8F6-3NFU>] (last visited Feb. 11, 2022). Woodpecker is a contracts and document generator that uses a Microsoft Word plug-in to facilitate the efficient creation of documents. Woodpecker was acquired by MyCase, a law firm case management solution, in late 2021.

²⁰ Contract Express, <https://mena.thomsonreuters.com/en/products-services/legal/contract-express.html> [<https://perma.cc/Z59V-MFRL>] (last visited Feb. 11, 2022). Contract Express is a tool from Thomson Reuters that allows users to draft, approve, negotiate, and execute documents.

²¹ HotDocs, <http://www.hotdocs.com> [<https://perma.cc/7KLG-U2CW>] (last visited Feb. 11, 2022). HotDocs is a document automation workflow platform that allows for automatic document creation.

²² Lawyaw, <https://www.lawyaw.com> [<https://perma.cc/2XSA-2UUE>] (last visited Feb. 11, 2022). Lawyaw is a document automation tool that converts documents in Word format to easily accessible and easy-to-use online templates.

²³ XpressDox, <https://xpressdox.com> [<https://perma.cc/CGY7-JPRX>] (last visited Feb. 11, 2022). XpressDox is a document automation system, built for small and solo law firms, but powerful enough for even the largest of companies.

²⁴ Marc Lauritsen, *Enhancing Contract Playbooks with Interactive Intelligence - Part I*, 1 J. ROBOTICS, A.I. & L. 327, 329-33 (2018) (describing a variety of transactional AI tools).

new agreements, or memorialize why different provisions are used for different purposes.

Many tools allow users to build and compare contracts with data mining technologies. Contract Standards²⁵ is one free and simple tool that allows users to sign-in, view libraries, view standard clauses, and understand how to compare and create documents and provisions using this external data. The tool also includes helpful flags that are good discussion points for practice, including which party the clause may favor, a description of what the provision seeks to accomplish, and guidance regarding each provision.²⁶

Many advanced document mining tools are available, as well. For example, ContraxSuite²⁷ and Bloomberg's Draft Analyzer²⁸ use AI to mine contractual provisions in internal or external libraries and compare them against language proposed in a contract. In addition, Bloomberg's Draft Analyzer benchmarks the draft language against market standard provisions, through use of the Securities and Exchange Commission's EDGAR database, to assist attorneys in drafting merger and acquisition purchase agreements.²⁹

c. Document Revision and Analysis Tools

Document revision and analysis tools assist attorneys in revising and refining documents. In both short and long legal documents, document revision and analysis tools can help attorneys identify problem areas of text, including in situations where the drafter has included duplicate provisions, ambiguous terms, or undefined terms.

Document revision tools like this have been around a long time. Microsoft Word has been offering spelling and grammar check for decades. Similar tools have grown in commercial popularity in the last

²⁵ Contract Standards, <https://www.contractstandards.com> [<https://perma.cc/8WZL-AUFB>] (last visited Feb. 11, 2022). Contract Standards is a document assembly tool that allows for the creation of standardized contracts and clauses, built on information from the Securities and Exchange Commission's EDGAR database.

²⁶ *Id.*

²⁷ ContraxSuite, <https://contraxsuite.com> [<https://perma.cc/W683-TXDH>] (last visited Feb. 11, 2022). ContraxSuite allows attorneys to locate provisions and clauses in their agreements, tag and manage documents, and match and duplicate documents.

²⁸ Draft Analyzer, <https://pro.bloomberglaw.com/draft-analyzer/> [<https://perma.cc/84A6-FYZ8>] (last visited Feb. 11, 2022). Draft Analyzer benchmarks draft language in agreements against "real-life" market standard provisions from publicly available EDGAR filings to streamline attorney work and provide helpful guidance to drafters.

²⁹ *Id.*

decade, as many high school and undergraduate students have become familiar with AI document revision tools like Grammarly, which can be used in Microsoft Word and in other programs, such as Outlook, Gmail, or Slack.³⁰ AI document revision tools in the legal industry have likewise grown in popularity, and several aim to serve transactional attorneys specifically.

Two document revision tools made specifically for transactional attorneys are Donna³¹ and Definely.³² Donna is an “assistive intelligence” program available as a plug-in for Microsoft Word that utilizes AI to revise transactional legal documents.³³ Donna’s technology highlights and links content within a Word document, offers suggestions, and identifies potential mistakes.³⁴ As Donna is specific to transactional documents, it highlights issues such as duplicate clauses, ambiguous terms, and undefined terms.³⁵ Similarly, Definely, with backing from Microsoft’s venture arm, provides editing and revision assistance in large-scale documents.³⁶ Definely uses a side panel to help the drafter keep their place by pulling up and comparing key provisions and definitions elsewhere in the agreement, making drafting easier (and the endless scrolling back to the definitions section in an agreement to a minimum!).³⁷

³⁰ Grammarly, <https://www.grammarly.com> [<https://perma.cc/5MCV-DPRK>] (last visited Feb. 11, 2022). Grammarly is a writing assistant that assists users in reviewing spelling, grammar, punctuation, and clarity in Word documents. While some may not consider Grammarly and similar tools “true” AI, they are built on an algorithm and fit squarely within the definition of AI because they complete important proofreading tasks that are typically done by humans. While some revision software does not include an element of human discernment, many do by offering suggestions for revisions. In these cases, the element of human discernment is left to the user not because the technology cannot do it itself (because they can, if they were programmed to do so), but instead because users are more likely to want a final “say” in reviewing the document.

³¹ Donna, <https://www.donna.legal> [<https://perma.cc/EJN9-WVNY>] (last visited Feb. 11, 2022). Donna is an AI powered Microsoft Word plug-in that scans transactional documents for errors, including duplicative clauses, ambiguous language, and other common errors, and makes suggestions for the user to help correct each error.

³² Definely, <https://www.definely.com> [<https://perma.cc/5558-P5DB>] (last visited Feb. 11, 2022). Definely is a tool aimed to help draft, review, and understand legal documents, including in connection with identifying the relevant definitions for defined terms.

³³ See Donna, *supra* note 31.

³⁴ *Id.*

³⁵ *Id.*

³⁶ See Definely, *supra* note 32.

³⁷ *Id.*

While transactional AI tools can ensure that an attorney's job is easier and streamlined, AI tools do not replace attorneys but instead help them. Attorneys must understand how the technology works—and how to work with it—to assist clients in practice.

II. Importance of Transactional Artificial Intelligence

Transactional AI tools help attorneys in a wide variety of ways, both in their billable work and in pro bono work. In both settings, transactional AI tools help attorneys make their practices more efficient, enabling attorneys to work faster and smarter. By utilizing transactional AI tools, attorneys can create documents in a more streamlined way, compare documents or their individual provisions more quickly, and revise documents to reduce error and eliminate ambiguity in drafting. Through these uses, transactional AI tools have a big impact on a variety of transactional legal work.

A. Impact on Transactional Practice

Just as AI facilitates efficiencies in litigation practices, AI also facilitates efficiencies in transactional practices. With increasing availability of transactional AI tools, including in traditional document assembly and dynamic document automation, attorneys can work more efficiently, save time, and scale routine and mundane work.

Document assembly tools enable attorneys to generate and assemble documents with speed and accuracy, saving attorneys time. In real estate conveyancing practices, for example, real estate attorneys can use dynamic document assembly tools to create conveyancing documents, closing documents, or other necessary documentation for a real estate transaction in a matter of minutes rather than hours. By utilizing technology, attorneys in this field can:

- cascade matter-specific information (such as a property address or owner's name) over a set of closing documents in seconds rather than making each edit on each document;
- insert pre-approved clauses relevant to each matter, such as mortgage contingency or inspection clauses; and
- pull information from public records or registry websites (such as tax information) to efficiently draft documents.

By utilizing such technology, attorneys can perform their work with greater efficiency and accuracy, increasing their ability to take on more work and reduce cost to the client.³⁸

³⁸ Because AI tools generally enable attorneys to save time on tasks, transactional AI tools often have the effect of reducing costs to the client. In the billable hour model, the application is simple: AI-powered work often takes less

Document and provision mining tools bring transactional precedent to an attorney's fingertips. By arming attorneys with information about provisions, including which provisions are considered "standard" or which provisions may be more likely to be accepted by a counterparty, attorneys can become better drafters and better advocates for their clients. In practices involving negotiated transactions, for example, attorneys can use document and provision mining tools to help identify how proposed language from a counterparty matches up against prior agreements in similar industries or for similarly situated transactions.

Document revision and analysis tools help attorneys draft and revise documents by identifying trouble spots in the text of a document. These tools identify common areas of revision in both long and short transactional documents, including undefined terms, duplicate provisions, and ambiguous language. In practices that involve long and complicated documents, for example, attorneys can use document revision and analysis tools to ensure that defined terms are appropriately carried through documents and that definitions included encompass the meaning of each term.

B. Impact on Transactional Pro Bono Work

In addition to the positive impact that transactional AI tools have on billable work, transactional AI tools can also positively impact transactional pro bono work. Transactional AI tools can be harnessed to make pro bono work more streamlined and efficient, provide clients with more sophisticated documents, and make self-service tools available to a wide audience.

Transactional attorneys throughout the country are well positioned to provide pro bono work to organizations and individuals with legal needs. While transactional pro bono work rarely receives significant notoriety and is often lower profile than litigation pro bono work, transactional attorneys can help individuals in transactional

time. Accordingly, clients are charged less because the time it takes an attorney to complete a certain task, such as generating a basic transactional document, takes less time. In the fixed-fee model, the application is generally the same as well. Because the attorney knows that the work will take less time, the attorney is more likely to offer the client a lower fixed fee for the work (when compared against the fixed fee an attorney might charge who does not employ transactional AI tools). Although the attorney may not always reflect the time savings in their fixed-fee estimates, if competing attorneys do, other attorneys may be forced to follow suit.

pro bono matters ranging from estate planning³⁹ and advising entrepreneurial small businesses⁴⁰ to creating community non-profits.⁴¹ Transactional AI tools can assist with these and other types of matters in three primary ways, some of which mirror how these same technologies help in billable work.

First, document assembly tools can save time, enabling attorneys to serve more pro bono clients. For example, attorneys can use document assembly tools in their pro bono practices to draft incorporation and other formation documents for non-profits and entrepreneurial small businesses. By automating a portion of this process, including in the drafting of the articles of organization and bylaws, attorneys can serve greater numbers of pro bono clients than before, harnessing the power of AI.

Second, document mining and benchmarking tools facilitate the sharing and comparison of important transactional precedent, which can save time and lead to more sophisticated work product. Because an attorney's pro bono matters are sometimes different in nature than an attorney's billable matters,⁴² document mining and benchmarking tools can leverage knowledge of multiple attorneys and help attorneys

³⁹ See Zayne Saadi, *Born Sinners Versus Born Winners: The Need for Estate Planning Inside Texas Prisons*, 12 TEX. TECH EST. PLAN. & CMTY. PROP. L.J. 471 (2020) (discussing the need for estate planning pro bono services for incarcerated individuals to ensure the wellbeing of spouses, children, and other family members living on the outside).

⁴⁰ At the University of Maine, a Rural Fellows program has worked to address the rural legal gap, including in less-populous areas of the state where there are fewer attorneys. See *Maine Law's Rural Lawyer Project awarded three-year grant from the Betterment Fund*, UNIVERSITY OF MAINE LAW SCHOOL, (October 22, 2019) <https://mainelaw.maine.edu/news/maine-laws-rural-lawyer-project-awarded-three-year-grant-from-the-betterment-fund/> [<https://perma.cc/A3C5-FUFU>] (last visited Nov. 19, 2021). Although the Rural Fellows program involves a range of work, one area of work addressed is focused on supporting small businesses.

⁴¹ See Rebecca Nieman, *A Fraction of a Percent: A Call to Legal Service Providers to Increase Assistance to Community Nonprofits Using BigLaw Pro Bono*, 40 U. ARK. LITTLE ROCK L. REV. 355 (2018) (describing the need to provide transactional pro bono representation for community non-profits and the lack of pro bono services such organizations have received).

⁴² For example, junior transactional lawyers who spend a majority of their time working on mergers or large asset purchases are unlikely to understand nuances in drafting non-profit formation documents. This divergence of skillsets is not unlike those in litigation practices, where junior litigators may be well-versed in intellectual property litigation discovery but may not be as well-versed in work that they may complete for a pro bono eviction matter. In this sense, document mining and benchmarking tools can help educate and inform the junior transactional lawyer in an area of law where they may have little experience.

more easily identify “good” transactional precedent to use when drafting agreements for their pro bono clients.

Finally, document revision and analysis tools can help more junior attorneys complete more work without the need for assistance from senior attorneys. Since document revision and analysis tools can help junior attorneys produce a better initial draft, senior attorneys may be more willing to ask a junior attorney to draft the initial version of a document, helping leverage the attorney’s time and resources and potentially allowing the law office or attorney to take on more pro bono matters. In addition, allowing an attorney to delegate more portions of their work may help in curbing hesitancy of more senior attorneys to take on pro bono (or low-bono) work.

III. Promotion of Transactional Artificial Intelligence in the Classroom

Because uses of transactional AI tools are increasing in practice and because such tools have the ability to impact transactional practice and transactional pro bono work, students should be introduced to transactional AI tools early in the law school experience. This section provides a path to introduce students to transactional AI tools and identifies goals and objectives for such exercises, suggestions for the introduction of exercises into the legal writing classroom, and suggestions for the introduction of exercises into upper-level offerings, such as in law school clinics.

A. Goals and Objectives

While law school courses, including legal writing courses, are increasingly incorporating AI technologies into their classrooms, transactional AI tools need not be left to the side in favor of litigation-based AI tools. This section will discuss considerations that professors and students must think about when utilizing transactional AI tools in their classrooms, in the law school, and, eventually, in practice.

Two venues are ripe for introducing transactional AI to students: first-year legal writing courses and legal clinics. In the first-year curriculum, legal writing courses are a good place to introduce students to transactional AI tools through simple exercises and assessments. By incorporating these tools alongside traditionally litigation-based tools, students understand that technology is important for all attorneys, and students are made aware of a variety of legal fields and practices. Beyond the first-year curriculum, legal clinics are a second opportunity to introduce students to transactional AI tools and exercises. In these settings, students can learn more detailed and advanced transactional AI tools.

While the power of transactional AI is exponential, AI does not replace critical thinking for students. Although transactional AI tools may generate a lease, incorporation documents, or a will, such document is only useful when the user creates it with intention and critical thinking. Just as a user must critically evaluate the case law returned from a powerful Lexis or Westlaw search, a user must similarly employ their own critical thinking when using transactional AI tools.

B. Considerations Regarding Ethics and Bias

Many questions exist regarding an attorney's required technical competence under the Model Rules of Professional Conduct.⁴³ These questions include whether transactional attorneys must be familiar with transactional uses of technology, how AI-based technology can be used in the access to justice effort, and how technology can automate the drafting of documents, particularly in service of traditionally underserved communities.⁴⁴ Although these questions are not addressed in this article, attorneys should know that competency requirements in the Model Rules of Professional Conduct exist. In addition, professors introducing transactional AI tools addressed in this article should discuss such competency requirements with their students.

Questions of bias inherent in AI-based tools must be considered, both in the classroom and in practice, as well.⁴⁵ Although a substantive discussion of bias in AI is not included in this article, attorneys using transactional AI tools should be aware of bias in AI and learn about strategies for acknowledging and recognizing such bias when using AI tools. Similarly, professors introducing transactional AI tools discussed in this article should consider raising a discussion of bias in AI with their students.⁴⁶

⁴³ See, e.g., Lori D. Johnson, *Navigating Technology Competence in Transactional Practice*, 65 VILL. L. REV. 159 (2020) (discussing the lack of guidance in the Model Rules of Professional Conduct with respect to transactional technological competence).

⁴⁴ *Id.*

⁴⁵ See, e.g., Drew Simshaw, *Ethical Issues in Robo-Lawyering: The Need for Guidance on Developing and Using Artificial Intelligence in the Practice of Law*, 70 HASTINGS L.J. 173 (2018) (discussing bias, ethics, and other considerations relevant when using AI to provide legal advice and legal work product for clients).

⁴⁶ See, e.g., Chris Chambers Goodman, *AI/Esq.: Impacts of Artificial Intelligence in Lawyer-Client Relationships*, 72 OKLA. L. REV. 149 (2019) (discussing the importance of thinking about and recognizing biases that are often imbedded into AI tools, including transactional AI tools).

Each of the above considerations should be introduced and discussed in a class when introducing transactional AI tools to law students.⁴⁷ Although many of these considerations are important in all types of AI technologies, including those that relate predominantly to litigation practices, discussion of these topics must also be included when discussing transactional AI tools.

C. Practical Examples: First-Year Curriculum

I have employed several assignments that teach the basic building blocks of transactional AI tools in the legal writing classroom.⁴⁸ This section details three practical assignments that can be introduced into the classroom in one class period or as a simple one-off assignment.⁴⁹ The first assignment introduces a basic document assembly tool, the second assignment introduces a transactional precedent comparison tool, and the third assignment introduces a document revision tool. These assignments are geared towards elementary use of transactional AI tools and represent an introduction to this topic for students. Advanced legal writing or transactional drafting courses could serve as a training ground for more complex use of transactional AI. For now, these assignments give students just a small taste of the most basic uses for these technologies.

After each assignment, students gave me overwhelmingly positive feedback. In my experience, students enjoy using technology, like understanding how lawyers use the technology in practice, and like to know what technologies they may be expected to use once they enter practice. In addition, students enjoy the discussions around how and when to use such tools. These exercises and discussions in my courses

⁴⁷ One suggestion for doing this that I learned from a colleague includes giving students some material on the topic to read and consider before coming to class. By providing students with material on the topic, such as a portion of one of the above-referenced articles or other writings on the topic, the professor is alleviated from being the “expert” in the area and students can share their reactions to the piece in class, fostering helpful classroom discussion.

⁴⁸ Because hindsight is 20/20, I slightly edited each of these examples to reflect what I would consider “best practices” in presenting these assignments, as sometimes I have lacked the requisite time to complete each step. I provide a full list of the steps and elements of each exercise here for completeness, although practically speaking professors (including myself) may need to omit a step or piece of the process due to other constraints.

⁴⁹ As this sentence implies, professors need not dedicate significant time to transactional drafting or transactional AI in order to introduce it into their legal writing course. One class period or a portion thereof can be an adequate amount of time to introduce some of the considerations described in this article.

have generated robust interest and students have noted them favorably on my course evaluations.

Example 1: Introduction to Document Assembly

Students can be introduced to document assembly tools by using CooleyGo to draft a non-disclosure agreement (“NDA”). This assignment gives students a brief look at a basic document assembly tool while also allowing for a discussion of preventive drafting techniques, use of transactional precedent, and use of transactional AI.

1. Students create an NDA for a fictional client to protect certain confidential company information.
2. Using a free version of CooleyGo, students work in pairs to generate the NDA and tailor the agreement to meet the needs of the client and the requests of the supervising partner.
3. Students submit the assignment and receive two modes of feedback: a) a sample mark-up of the agreement that demonstrates how one transactional attorney could have approached the document assembly and revision process, and b) individual feedback on their draft.
4. Students de-brief the assignment in the next class, discussing their experience with CooleyGo, applications of transactional AI to other areas of practice, considerations related to competency under the Model Rules, and ethical considerations in using transactional AI.

Although professors could use different document assembly tools for this assignment, I like using CooleyGo, especially for a first taste of document assembly, because it is easy to use, reputable, and efficient. Although more sophisticated tools have more robust and dynamic “if-then” decision tree technology, this tool serves as a good starting point for students.

Example 2: Introduction to Transactional Precedent Comparison⁵⁰

Students can be introduced to document and provision research comparison tools by using Contract Standards to revise the above NDA or another agreement used in another portion of class. This assignment allows students to expand their knowledge of provisions and transactional precedent beyond the one provision used in an assembled document. In addition, this assignment allows students to evaluate different provisions and consider when they should be used

⁵⁰ I have tried similar exercises with my students but have yet to try this specific example. I anticipate that this exercise would be successful based off discussions with students.

in a document. By using a service such as Contract Standards, students are introduced to the basic tools of document and provision research and comparison and can envision how a more sophisticated product can assist in their legal career in practice.

1. Following the drafting or revision of a transactional document, such as the NDA described or the non-compete agreement below, students are assigned to evaluate the effectiveness of three provisions in the agreement.
2. Students download a free trial version of Contract Standards and use it to review the different Libraries and clauses available for use in revising the document.
3. Students determine whether the existing language in the contract (from step 1) is more or less helpful than other identified alternatives. Students draft a memo or email detailing their recommendations, including whether the provisions should be replaced with something that they have identified.
4. Students de-brief the assignment in the next class, discussing the options for re-drafting the initial agreement and their reasoning for such suggested revisions, if any.

While this assignment only scratches the surface of the transactional AI power of Contract Standards, it helps students understand how transactional precedent databases work. Professors can discuss how a more in-depth and advanced application of the database can assist attorneys in efficient and effective practice.⁵¹

Example 3: Introduction to Document Revision

Students can be introduced to document revision technology by using Donna to revise a document, such as a non-compete agreement. This assignment enables students to revise a document they may have familiarity with, including a document that may have been the subject of a prior assignment. In addition, this assignment allows students to become familiar with using document revision software specifically designed for a transactional attorney. By highlighting information in an agreement and making suggestions as students work, Donna's

⁵¹ It is worth noting that this application is for use in a basic legal writing course. In an advanced writing course, contract drafting, contracts, or another related course, professors could create their own internal database of agreements and ask the class to use that database to complete a project like this or draft a document. This application would be more in-depth and provide students with a more powerful example of transactional AI. Since the audience of this publication, however, is mainly first-year legal writing professors (who may have limited experience with transactional drafting or may not teach transactional drafting), I have included a more introductory example.

technology can foster robust discussion of transactional drafting considerations, questions about the underlying law, and use of transactional AI in practice.

1. Following the submission of a persuasive memorandum on the enforceability of a non-compete agreement, students are tasked with revising a different non-compete agreement for a fictional client.
2. Students are given a brief, one-page, “bad” non-compete agreement that includes several drafting errors, including some that students may recognize on their own and some that they may not.
3. Students download a free trial version of Donna to help evaluate and review the non-compete agreement. Students work independently, with Donna, to analyze the document, working through suggested revisions and deciding which revisions to make.
4. Before the next class, students are provided with a sample mark-up showing a sample revised document, noting where revisions suggested by Donna were not made.
5. Students de-brief the assignment in the next class, discussing their experience using Donna, how attorneys review and revise documents, and how attorneys might be expected to use document revision transactional AI in practice.

Although there are many transactional AI tools aimed at document revision, I like using Donna because it is specific to transactional drafting. Although the tool does not explicitly look for superfluous language or streamline sentence structure,⁵² Donna does focus directly on the contractual language, noting duplicate provisions, ambiguous provisions, and other key information necessary when discussing transactional drafting.

D. Practical Examples: Upper-Level Curriculum

In addition to the introductory examples discussed above, opportunities to dive deeper into transactional AI tools in the upper-level curriculum are available, including in clinical settings. While opportunities to leverage transactional AI could be integrated into a variety of upper-level courses, this section details three examples that can be

⁵² Tools such as WordRake do edit for superfluous language. WordRake, using a Microsoft Word plug-in, allows users to “tighten, tone and clarify” writing. WordRake, <http://www.wordrake.com> [<https://perma.cc/3G85-D7PG>] (last visited Feb. 11, 2022).

used in transactional clinics.⁵³ The first example identifies how document assembly tools can be used, the second example identifies how transactional precedent comparison can be used, and the third example identifies how document revision can be used. These three examples are framed in the same categories as those identified in the section above and are intended to move past the basic introduction of transactional AI represented there.

Example 1: Dynamic Document Assembly

Transactional clinics can use document assembly tools, developed by commercial vendors or in-house colleagues, to automate intake, draft initial documents, and provide self-service document assembly tools to the public. By using document assembly tools in this way, clinics can more efficiently serve existing clients, reduce the time necessary for drafting documents, and develop “self-help” resources that can be disseminated to the community.

While this type of work can be initiated for a variety of pro bono matters, one area ripe for this type of work involves drafting incorporation documents for non-profit entities or small-scale entrepreneurs. In this example, transactional clinics can utilize document assembly tools to facilitate expedient drafting of incorporation documents, by-laws, or limited liability agreements.

1. Students draft a dynamic intake form that includes various “if-then” decision-tree statements designed to walk a client through the high-level considerations necessary to draft an incorporation agreement.
2. Clients fill out the dynamic intake form, answering questions about their proposed entity and filling in basic information, where available (e.g., director or other personnel names, addresses, and expected terms).
3. A document assembly tool produces an initial incorporation document for the client based on the information provided.
4. A student attorney and the client both review the draft document and meet to discuss questions, clarifications, or additional revisions necessary.

⁵³ This article focuses on the clinical setting for these examples in order to highlight the positive impact that transactional AI tools can have on the communities in which lawyers sit. These examples, however, need not be limited to the clinical setting and could be adapted to upper-level legal writing courses, including transactional or contract drafting courses and other upper-level writing courses that focus both on litigation-specific and transactional-specific drafting.

Although this example contemplates the creation of a new and unique document assembly tool designed for this specific purpose, clinics can use existing “off the shelf” products, such as those that allow for the basic drafting of an incorporation or limited liability company agreement, to accomplish the same goal.⁵⁴

Example 2: Transactional Precedent Comparison

Clinics can rely on transactional precedent comparison tools to create their own dynamic databases of annotated provisions necessary for their specialized field of practice. Such dynamic technology allows students to design, create, and maintain a knowledge library of relevant provisions necessary for the execution of client-centered documents.

While utilizing this type of technology can be helpful in a variety of clinic settings, one example where this technology can be especially valuable is in non-profit clinics. In this example, a database can help foster efficiency in the preparation of IRS forms required for non-profit entities seeking tax-exempt status.

1. Students design a document provision database aligned with the standard answers typically used on IRS Form 1023, the form used to request tax exempt status for a non-profit entity.
2. When drafting the form for a client, student attorneys use the database to determine which provisions are considered “standard” for their clinic or client industry.
3. In addition to the above, students view comparisons to provisions previously used or tagged as helpful for their specific industry to tailor the drafting to a particular client or industry.
4. Students generate a first draft of the document using the integrated document generator.

While this example represents a basic use of document and provision research and comparison, it serves as a foundational example for informing drafting decisions. Clinics can populate tools like Contract Standards with frequently used provisions or with sample language to familiarize students with this technology.

With proper resources, clinics could expand upon the above and use the same technology to build a national database of document provisions for non-profit clinics. With such a diverse range of inputs and the right administration, the database could identify “standard”

⁵⁴ One example of an “off the shelf” product that already allows for the creation of a limited liability company agreement is WhichDraft. WhichDraft, https://whichdraft.com/public_contract.php?id=44080120081320 [https://perma.cc/Y6TF-GYJB] (last visited Feb. 1, 2022).

or “market” language for each provision and could automatically compare the drafted provision to the market provision. In addition, the system could identify potential suggested provisions based on a system where people could “like” each helpful provision.

This type of technology is not limited to the non-profit arena and could apply to a variety of other clinics, including clinics focused on patents and trademarks, wills, and entity formation, among others. This type of technology would help students and clinicians in these practices make more informed drafting decisions, especially when aggregated among a variety of participating clinics.

Example 3: Document Revision

Clinics can use document revision tools to produce documents with fewer errors and to aid in the learning process. By utilizing tools like Donna or Definely, students can draft with greater confidence, reduce drafting errors, and learn important drafting considerations.

In this example, clinical students can sign up for free or low-cost programs, like Donna or Definely, and use such programs to aid in their review and revision of documents, such as in drafting a will.

1. Students draft the will using a word processing software, such as Microsoft Word.
2. After downloading a free or low-cost version of a document revision tool specific to transactional drafting, students can enable the tool to review the document and accept or reject suggestions made by the tool.
3. Students can revise the document (or keep original language) as the situation permits. This process allows students to engage in higher-level thinking about the choices related to their drafting and ensures that the document is less likely to contain errors before going to the client.

Using services like Donna or Definely may, over time, help students draft documents with fewer errors and may result in fewer revisions a supervising attorney must make when reviewing a document. As a result, document revision tools may free up more time for students and supervisors in the clinic, allowing the clinic to serve more clients or engage in other strategic priorities.

Conclusion

Accepted by many practitioners and adopted in many aspects of the legal profession, AI is here to stay. AI in transactional practice is no exception. As evidenced by the breadth and depth of the tools discussed herein, the market has demonstrated a demand for transactional AI tools. In addition, practitioners are increasingly using these

tools to better their practices: driving efficiencies, reducing costs, and producing better work for clients.

To ensure that the new generation of transactional lawyers is prepared to practice with transactional AI tools, law schools must introduce transactional AI tools today. By introducing basic transactional AI tools and approaches in legal writing courses, professors can introduce students to these tools and demonstrate how such tools can positively affect billable and pro bono work. By introducing these same transactional AI tools in upper-level courses, students can learn how such tools can positively impact pro bono work, increasing the ability of the legal profession to serve its communities.

Through increased awareness about these tools and by integrating the introduction and implementation of such tools throughout the first-year and upper-level curricula, students will become more comfortable using these tools, future attorneys will increasingly employ such tools in their work, and pro bono clients will benefit from the increased efficiencies and scale these tools provide.