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Ex Machina: Technological Disruption and the Future of Artificial Intelligence in Persuasive Legal Writing

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ABSTRACT

Technology is disrupting the practice of law and revolutionizing how lawyers work. This revolution is made more powerful because it is increasingly coupled with a rigorous and scientific approach to the law. In some ways, law is looking more like a Silicon Valley startup and less like the oak-paneled law firms of the last 200 years. As law, technology, and science merge, the implications for the profession are wide-sweeping. This article explores persuasive legal writing, offering new thoughts on what the future will hold. Specifically, this article pilots a method for applying technology and science to measure, analyze and improve persuasive legal writing, offering it as a proof of concept that anchors the article's broader, and perhaps more controversial assertion. Namely, more powerful and refined persuasive legal writing software tools, fueled by artificial intelligence, should and will disrupt and reshape significant portions of the legal space, including how legal writing is taught and how it is produced. The effect will be to view legal writing as more science, and less art. The next set of luminaries won't rely on anecdote or intuition to teach or create legal writing; they will rely on software and data.

KEYWORDS

Legal Technology; Legal Research; Legal Writing; Empirical

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INTRODUCTION

Empirical legal writing studies, powered by new technologies, will fundamentally disrupt and revolutionize how we think about persuasive legal writing. This article argues, through a pilot study that serves as a proof of concept, that, over the coming years, the fog of advice about persuasive legal writing style can largely be cleared by developing better tools to measure persuasive legal writing and better methods for studying the effect of legal writing on outcomes. It argues that, as persuasive legal writing becomes more science and less art, legal writing software powered by artificial intelligence[1] will disrupt a variety of fields, including how legal writers create briefs, the legal insurance industry, legal finance of cases in litigation, and how legal writing is taught to students.

We can and should move away from anecdote and assumption, and towards software and data. For years, professors (including me), legal writing gurus (like Bryan Garner who has made millions teaching legal writing), and judges (like the late Antonin Scalia) have talked about "how" to write effectively. But the truth is that this advice is largely untested – and as some law students would gladly tell you – too often inconsistent.

[1] A.I. is an umbrella term that covers a range of technologies that learn over time as they are exposed to more data. Pedro Nava et al., Artificial Intelligence: A Roadmap for California (Little Hoover Commission 2018), https://lhc.ca.gov/sites/lhc.ca.gov/files/Reports/245/Report245.pdf. A.I. is the quality of any computer system (data, algorithms, analytics, bots, etc.) the ability to sense, reason, adapt, learn, and understand just like humans can. *Id.* In the deeply developed sectors, A.I. technology can encompass the ability to reason through to conclusions and learn to adapt specific outputs or behaviors to circumstances. *Id.*

For years, I have told my law students that if you were to put ten world-renowned appellate lawyers in a room, gave them the same legal problem, and then had them write briefs, those briefs would be profoundly different. To be fair, some of this variation is a result of options in the legal analysis sphere. But assume for a moment you gave the attorneys the same cases, the same strategy, and the same frames. Assume you even gave them the general order in which the arguments would be presented. The briefs would diverge nonetheless. The writing style among the briefs would vary, sometimes significantly. To fully understand this notion, you only need to read a few briefs for the United States [hereinafter U.S.] Supreme Court. World-renowned attorneys with proven track records take markedly different approaches in their written advocacy, so much so that their styles are a sort of fingerprint and the author can be guessed by the style and tone alone.

The same variance occurs if you put ten legal research and writing professors in a room. Within my own department, we have engaged in rigorous debates about how students should be taught to write during our monthly meetings. We all think we know the "truth" about what lessons or writing methods work. The picture is no different if you read books on legal writing, or if you attend conferences dedicated to the art.

Why are there such marked disagreements? The pat answer is that legal writing is complex, and personal preferences dominate. We might even say authors have to be themselves, and find the approach that works for them. I take a different view. We see variance in what people treat as "good" legal writing because we suffer from a severe deprivation of data. Like ancient people performing rain dances because their understanding was limited by the availability of knowledge, we argue about what "works" in persuasive legal writing because we do not actually know. Sure, we have hunches. And to be fair, some of these are formed over years of experience, making them more like educated guesses or very crude statistical inferences. But there is little hard data upon which to draw any salient conclusions. And absent hard data, the best we can do is guess.

Law students reading this might be nodding along as they have sensed the inherent 'squishiness' (to use a technical term) of the advice their law professors give. Similarly, associates forced to write for more than one partner may too smile in agreement, as they have been forced to write in two styles to please two partners – both of which are sure they *know* how a good brief is written. Or maybe even the professors are quietly agreeing, as they have read books like Garner and Scalia's co-authored book on writing, *Making Your Case: The Art of Persuading Judges*, in which the authors openly disagree on a variety of stylistic choices.

We can do better. The remainder of this article explores these issues, suggests future work, and discusses what the future of persuasive legal writing should look like in the twenty-first century.

1. TECHNOLOGICAL REVOLUTION IN LAW

No matter where you look in the practice of law, a combination of technology and an increasing scientific rigor are changing how lawyers work. This change began before COVID-19, but the pace has accelerated as more lawyers work remotely, cases are increasingly decided on briefs and not oral argument, and in general, the practice of law embraces technology at a faster rate. A few examples make the point and help predict how technology will do the same to persuasive legal writing.

1.1. EXAMPLES FROM OTHER LEGAL SETTINGS

Deposition Transcripts: Highlighters and underlining depositions was the norm well into the 2000s. The more advanced lawyers cut depositions using Microsoft Word. Now, a new generation of lawyers uses Transcript Pad.[2] This application allows them to read a deposition on their iPad, tap the parts they want to highlight, assign them flags with topical names, and then print a report for any topic – or all topics.[3] That report identifies the page and line, and produces all the text.[4] For a practitioner creating one summary judgment, this could save two dozen hours of lawyer time.[5]

Focus Groups: For decades, before a trial, lawyers assembled focus groups. They presented their case, asked questions, and had the mock jurors deliberate. Today, massive online samples of on-demand workers are replacing these methods.[6] With big samples, precise measures of case value, A/B testing of trial strategy, and jury analytics identifying

[2] Virginia H. McMichael, *Using the Latest Technology to Tame the Appellate Record and Produce Better Briefs*, 41 Pa. Law. 48 (2019).

[3] Robert Ambrogi, *42 Essential Apps for Trial Lawyers in 2016,* Nat'l L. Rev. (Mar. 16, 2016), https://www.natlawreview.com/article/42-essential-apps-trial-lawyers-2016. *See also* Stephan Futeral, *From Toys to Tools Essential Tablet Apps for Lawyers*, 49 Tenn. Bar J. 14, 15 (2013) (mentioning the many apps available to lawyers to work on their iPad).

[4] Ambrogi, *supra* note 3 (the app "enables you to store, organize, review and annotate all your transcripts on your iPad...[fl]ag and highlight important sections and assign issue codes").

[5] Court requires parties to submit the page and lines for all cited depositions, but most courts prohibit including the entire deposition. In the past, cutting the depositions has consumers massive amounts of lawyer or paralegal time.

[6] Carol L. Bauss, Speech at the American Association for Justice 2018 National Convention: Technology Use in Focus Groups and Jury Selection (Jul. 27, 2018) mentioning two tech tools: (1) software, "Voltaire," which

ideal jurors is possible.[7] Emerging companies in this work, which has emerged in only the last three to five years, are already reporting involvement in over one-half billion in verdicts.[8]

Trial Presentation: For trial, lawyers often hired a videographer and a technologist for trial.[9] The videographer cut all the videos. The technologist set up the screen, ran the projector, organized documents to be displayed to the jury, and more. Meanwhile, the paralegals managed boxes of documents to be shown to witnesses, with copies for opposing counsel and another for the court. Fast forward to today, where a solo practitioner can download software on their laptop or an app on their iPad that will manage documents, allow for calling out documents on the screen, highlight text for witnesses, allow the attorney to label all exhibits, and to distribute them to the court and opposing counsel.[10]

Intellectual Property: Within the field of intellectual property, lawyers who evaluate patents now regularly rely on a variety of software to do their work.[11] They use programs that analyze the patent application language to determine how it compares to past granted and denied claims.[12] They analyze the grant rate by department and examiner, and they manipulate patent language to optimize the likelihood of success.[13]

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performs searches in databases and on the web of prospective jurors, and (2) online focus groups or surveys. "Both technologies save time and money and provide valuable insights into how jurors will view a case." *Id.*

[7] Ann T. Greeley, *New Online Methods for Jury Research*, ABA Prac. Points (Jul. 31, 2018), https://www.americanbar.org/groups/litigation/committees/products-liability/practice/2018/new-online-methods-for-jury-research/. *See also* Murray Ogborn & Theresa Zagnoli, *Future trends and potential of focus groups*, *in* 3 Litigating Tort Cases (2019).

[8] *See e.g.* www.empiricaljury.com.

[9] *See* Frank L. Branson, *Types of demonstrative evidence—Video*, *in* 4 Litigating Tort Cases (2019) (discussing the potential needs for a videographer);Philip Beatty, *The Genesis of the Information Technologist-Attorney in the Era of Electronic Discovery*, 13 J. Tech. L. & Pol'y 261, 262 (2008) (an older discussion on the use of technologists in a time where eDiscovery was just starting to ramp up).

[10] TrialDirector 6 for laptop and TrialDirector for iPad are both widely popular programs. L. David Russel & Jeffery A. Atteberry, *Pros and Cons of Trial Presentation Software Programs*, Law 360 (Apr. 7, 2014), https://jenner.com/system/assets/publications/12930/original/Russell_Atteberry_Law360_April_2014.pdf?1397055443. With TrialDirector 6, attorneys "can call up exhibits quickly and easily with the use of 'hot key' shortcuts"; they can "also 'call out' and highlight selected text, and make numerous other annotations on the fly." *Id.* The program handles documents well and can also be used for showing and editing deposition video. *Id.*

[11] Victoria Hudgins, *Eyeing Patent Market, Casetext Moves to Expand Its CARA Research Platform*, Law.com (Oct. 23, 2019), https://www.law.com/legaltechnews/2019/10/23/eyeing-patent-market-casetext-moves-to-expand-its-cara-research-platform/?slreturn=20200113163409(CARA Patent uses A.I. technology developed by Casetext to instantaneously reveal the most applicable cases and other IP guidelines).

[12] *Id.* Intellectual property A.I. programming takes the citations and key terms found within the patent and uses patent-specific motion filters, co-reference evaluation, and patterns in PTAB opinions to discover the most pertinent results.

[13] *Id. See also* Edgar Rayo, *A.I. in Law and Legal Practice – A Comprehensive View of 35 Current Applications*, Emerj (Nov. 21, 2019), https://emerj.com/ai-sector-overviews/ai-in-law-legal-practice-current-applications/ (discussing other A.I. in IP practice, like Lex Machina to analyze opponent's arguments).

Practice Management: The managing of a legal practice is a multifaceted and sometimes overwhelming aspect of any lawyer's job. The basic features needed to run a successful practice at any size include document and task management, time tracking, bookkeeping and billing, and keeping communications secure.[14] Most commonly, firms and solo practitioners have used separate software programs for each of these categories. However, practice management software is evolving to address all legal management needs in one platform.[15] Lawyers who have streamlined document assembly, automated workflow, and have access to useful reports increase their productivity significantly.[16]

From these examples, we see that a combination of technology and data analysis are driving change. The goals are simple: do better work in less time. Lawyers demand these products, and companies are increasingly happy to invest in making them, as they see an emerging, lucrative market.

1.2. REVOLUTION IN LEGAL RESEARCH AND WRITING TOO

Although it may not be obvious now, technology will similarly revolutionize legal research and writing. The influence is particularly strong in legal research. The revolution began before COVID-19, but the pandemic has certainly accelerated the pace. Some attorneys were early adopters who viewed technology as a way to save time and improve results. However, lawyers and the legal field are notoriously resistant to change. COVID-19 is changing that. Lawyers are forced to take depositions by video, stodgy judges are holding hearings by Zoom, and in general, attorneys are recognizing that technology is not a luxury – it is a necessity.

Regarding legal research, the first steps towards real change are happening now. A host of new tools are emerging to research legal questions.[17] Instead of searching for keywords and using Boolean terms to build the search logic, new programs work in

[14] Nicole Black, *The Ins and Outs of Law Practice Management Software,* ABA J. (2019), https://www.abajournal.com/news/article/the-ins-and-outs-of-law-practice-management-software.

[15] *See e.g.,* Clio, https://www.clio.com/. Clio has emerged as one of the most comprehensive practice management platforms available. Along with a robust list of typical management features, it offers client relationship management (client intake, appointment booking, email automation, etc.) and integrates seamlessly with other popular applications like Google Apps, email, and Dropbox.

[16] *See* Tom Caffrey, *Law Practice Management Systems,* 35 GPSolo 61, 62 (2018) (discussing technology options and principles of good practice management); Joe Forward, *Prioritize Efficiency, Maximize Time: The Economics of Law Practice*, 91 Wis. Law. 26, 33 (2018) (discussing a survey on how law offices have used legal management service providers to address client demands and time-use patterns).

[17] To name a few: Bloomberg Law, Casemaker, Casetext, Fastcase, Findlaw, Justia, LexisNexis, MyCase Inc., Ross Intelligence, Westlaw Edge, and so much more.

different ways.[18] They are rooted in algorithms and natural language recognition.[19] These processes pull context from uploaded documents and build connections to core issues.[20] The programs, many of which feature artificial intelligence [hereinafter A.I.], find patterns in facts, procedural history, and citations, all in a matter of seconds.[21]

Tools like Westlaw and Lexis have eschewed traditional searches where users build their own search terms, instead relying heavily on "natural language" searches rooted in algorithmic decision-making that functions like Google searches.[22] The algorithms examine language of cases, but they also consider what cases other lawyers have clicked on when running similar searches, the frequency of citation, and more to rank results.[23]

Using A.I. in legal research cuts the time spent sifting through case law, or the cases cited by an opponent, to a fraction of what it once was, all while being more efficient and relevant.[24] In this way, software is already improving the legal content of briefs.

Refined legal research is bleeding into the production of better briefs, by refining their legal content. Casetext's brief-analysis software, called CARA (Case Analysis

[18] An example of an A.I. feature in Westlaw is Folder Analysis, which is a feature that is driven by the researcher's interaction with the materials found that are placed into a research folder. Nicole Black, *Legal Research and A.I.: Looking Toward the Future*, Above the Law (July 27, 2017), https:abovethelaw.com/2017/07/legal-research-and-ai-looking-toward-the-future/. After the researcher has designated some documents to a specific folder, the contents of the folder are analyzed, and additional cases are recommended based on the key issues identified by the analysis.

[19] *Id.*

[20] Mike Whelan Jr., *What's Left for Lawyers?*, ABA TechReport (Dec. 11, 2019), https://www.americanbar.org/groups/law_practice/publications/techreport/abatechreport2019/casetextsponsored/.

[21] *Id.*

[22] Michael Mills, *Artificial Intelligence in Law: The State of Play 2016*, Thomson Reuters, (Mar. 24, 2016), https://www.neotalogic.com/wp-content/uploads/2016/04/Artificial-Intelligence-in-Law-The-State-of-Play-2016.pdf.

[23] Although there are several factors that go into ranking the search results in each database, there is a lot of secrecy when it comes to each platform's algorithm. Different research databases dispense strikingly different search results. Many speculate that relevancy, key terms, and other factors play a part in the algorithm, but no one truly knows. *See*Susan Nevelow Mart, *The Algorithm as a Human Artifact: Implications for Legal [Re]Search*, 109 Law Libr. J. 387 (2017)(comparing search results using the search algorithms in Westlaw, Lexis Advance, Fastcase, Google Scholar, Ravel, and Casetext). Mart narrowed in on the issue that legal research has been a struggle, requiring redundancy in searching because these different algorithms yield vastly different results. *Id.* at 390. Mart attributes the variation in search results using the same search terms to the biases inherent in the algorithms, as humans are the ones who essentially code the algorithms and build bias into the systems. *Id.* at 394.

[24] *See* Stephanie Wilkins, *The Key to Crafting A Winning Argument? Context,* Above the Law (Jan. 25, 2019), https://abovethelaw.com/2019/01/the-key-to-crafting-a-winning-argument-context-2/?rf=1.
In 2018, LexisNexis launched Context, which analyzes the language of specific judges' opinions to detect cases and arguments each judge views as persuasive. Bob Ambrogi, *'Context,' Launching Today from LexisNexis, Applies Unique Analytics to Judges and Expert Witnesses,* LawSites (Nov. 29, 2018), https://www.lawsitesblog.com/2018/11/context-launching-today-lexisnexis-applies-unique-analytics-judgesexpert-witnesses.html. LexisNexis acquired Ravel Law, which initiated these original analytics; Ravel's tools are incorporated into Context within the Lexis Advance legal research platform. *Id.* Context originates the data from court documents and uses the data to predict how likely an argument is to prevail, how judges will rule on expert testimony, and to output language federal judges use most often to decide motions. *Id.*

Research Assistant), is a good example. Upon uploading any legal document into the program, latent semantic analytics[25] pull case law from a multitude of databases and produce results directly related to issues implicated by the document. [26] Importantly, this includes cases that have been overlooked or not cited in the text.[27] This is particularly helpful in drafting a response to briefs submitted by opposing counsel, as it quickly identifies cases they missed or intentionally omitted.[28]

Clerk from Judicata is another A.I.-powered brief analyzer, with a focus on evaluating the strengths and weaknesses of arguments in an uploaded document.[29] According to the advertisements, it is designed to "increase the chances of winning motions," Clerk assesses the arguments, drafting, and context of a brief compared to cases that have historically proven to be more favorable for one side or another.[30] The program aims to help lawyers craft briefs that present logically favorable cases, along with arguments that have a strong history of being followed.[31]

While CARA was the first A.I.-powered search feature to come onto the scene, many more have followed. Other brief analyzers include:

a. EVA from ROSS Intelligence—scans the brief to check the authority cited to determine whether all citations are still good law;[32]
b. Vincent from vLex—analyzes briefs in both English and Spanish, and is often used as a foreign-law resource;[33]
c. Quick Check from Thomson Reuters—advertises delivering a limited set of the most highly relevant results from uploaded briefs;[34] and
d. Brief Analyzer by Bloomberg.[35]

[25] *See* Shannon Brown, *Peeking Inside the Black Box: A Preliminary Survey of Technology Assisted Review (TAR) and Predictive Coding Algorithms for eDiscovery*, 21 SUFFOLK J. TRIAL & APP. ADVOC 221 (2016)(latent semantic analysis is a natural language processing technique that analyzes relationships between a set of documents and the terms they contain by producing a set of concepts related to the documents and terms).
[26] Pablo Arredondo & Chelsea Strauss, *Putting Casetext's CARA to the Test*, Stan. L. Sch. Blogs (Dec. 9, 2016), https://law.stanford.edu/2016/12/09/putting-casetexts-cara-to-the-test/.
[27] *Id.*
[28] *Id.*
[29] *See e.g.* Judicata, https://www.judicata.com/demo/clerk/report (last visited Feb. 8, 2020).
[30] Beth Hoover, *Introducing Clerk,* Judicata (Oct. 5, 2017), https://blog.judicata.com/introducing-clerk-848abbed8fd3.
[31] *Id.*
[32] *See* Ross Intelligence, https://rossintelligence.com/ (last visited Feb. 8, 2020). Not only does the system check all the authority for good law, but then the program generates its own legal research to find better cases to support the overall position.
[33] Bob Ambrogi, *Vincent Joins CARA, EVA and Clerk as the Latest A.I.-Driven Research Assistant,* LawSites (Sept. 20, 2018), https://www.lawsitesblog.com/2018/09/vincent-joins-cara-eva-clerk-latest-ai-driven-research-assistant.html.
[34] Bob Ambrogi, *A.I.-Driven Brief Analysis Comes to Westlaw, But Does It Differ from Competitors?,* LawSites (July 12, 2019), https://www.lawsitesblog.com/2019/07/ai-driven-brief-analysis-comes-to-westlaw-but-does-it-differ-fromcompetitors.html.
[35] *See* Bloomberg, https://pro.bloomberglaw.com/brief-analyzer/ (last visited Feb. 7, 2020).

Another area of continued innovation revolves around textual analysis software that focuses not on case law, but on identifying patterns with documents (or sets of documents).

The use of A.I. is most common in e-discovery.[36] Over the last few decades or more, the use of A.I. to sift through documents in discovery has grown exponentially. In that setting, A.I. lets lawyers work through tens of thousands of documents quickly by automatically searching for common language, buzz words, repetition, confidential information, and more.[37]

As e-discovery emerged, lawyers grappled with growing data volumes and the time-consuming job of reviewing that data. Technology assisted review [hereinafter T.A.R.] allows lawyers to review a "seed-set" of a large collection of documents after which the system will automatically go through the complete collection.[38] Not only does this save teams of lawyers' countless hours, but often T.A.R. systems return more accurate and complete results than a team of humans would.[39] E-discovery incorporates predictive coding and A.I. tools, like natural language capabilities and machine learning.[40] These tech improvements in review processing make reviewing more types of data possible, even those data sets that are unstructured.[41] The development of these complex textual analysis tools is essential for document review, but it is also innovation that has quickly carried over into new fields.

For example, a growing sector in "Legal Tech" deploys A.I. to examine contracts and to draft them.[42] At their core, these programs compare existing contracts to thousands of past contracts to identify similarities and differences, and they suggest core terms for new contracts.[43] But beyond that, they also "learn" from the contracts they review, so that the advice they offer evolves as contracts evolve.[44]

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[36] Sergio D. Becerra, *The Rise of Artificial Intelligence in the Legal Field: Where We Are and Where We Are Going*, 11 J. Bus. Entrepreneurship & L. 27, 39 (2018).

[37] Sharon D. Nelson & John W. Simek, *Running with the Machines Artificial Intelligence in the Practice of Law,* Or. St. B. Bull., Dec 2017, p 22, 23-24.

[38] Kent B. Goss et al., *Welcome to Your New War Room,* 34 Westlaw J. Corp. Officers Dir. Liab. (2019).

[39] *Id.*

[40] Jamie J. Baker, *2018 A Legal Research Odyssey: Artificial Intelligence as Disruptor*, 110 Law Libr. J. 5 (2017).

[41] Goss, *supra* note 38.

[42] Blake A. Klinkner, *Artificial Intelligence and the Future of the Legal Profession*, Wyo. Law., Dec 2018 p. 26, 28 ("Natural language processing and machine learning have allowed programs to be developed which may analyze large datasets of contractual documents and attendant datapoints, and then learn which contractual terms and conditions are best under certain conditions."). This inherently means that computers are drafting the entirety of contracts using data from clients, with the capability to flag potentially negative language in an opposing contract for a lawyer to review. *Id.*

[43] Nicole Black, *Here's the Lowdown on Contract Analytics Software*, ABA Journal, (Mar. 23, 2018), http://www.abajournal.com/news/article/heres_the_lowdown_on_contract_analytics_software.

[44] *Id.*

Document generation has entered the market with software programs that generate wills, real estate documents, incorporation documents, and promissory notes.[45] Take for example JPMorgan Chase, who introduced COIN, a contract intelligence system that reviews commercial loan agreements.[46] COIN reduces mistakes and cuts review time significantly. A due-diligence program created for mergers and acquisitions, DLA Piper, incorporates the same system.[47] Other programs like Kira and Lawgeex have the ability to suggest edits to contracts based on pre-defined parameters.[48]

But these are just early steps, steps that will look humble, even quaint in a few years – like looking at a Commodore 64 next to an iPhone. Technology has changed the legal market, and as technology progresses and expands, those changes will reach every corner of practice. This includes, as this article examines, the tone, style, and overall feel of briefs. It is beyond the scope of this article to discuss whether this disruption will replace lawyers. Those topics have been discussed at length by others.[49] But it is my opinion that as legal technology reforms our understanding of persuasive legal writing, we will all be better for it.

2. DEMYSTIFYING PERSUASIVE WRITING THROUGH TECHNOLOGY

Improving the way we think about persuasive legal writing is necessary if we are to move beyond anecdote and contradiction. Conventional wisdom about good legal writing abounds. Unfortunately, such wisdom is often untested and contradictory. For instance, as mentioned above, when Bryan Garner and former Justice Antonin Scalia co-wrote a book, on legal writing, the two brilliant writers could not agree on using contractions,

[45] Stephanie Wilkins, *Top 4 Documents Automation Software Tools for 2020 - Reviewed*, ABOVE THE LAW (Feb. 5, 2020), https://abovethelaw.com/?sponsored_content= top-4-document-automation-software-tools-for-2020-reviewed (reviewing four document generating tools—Documate, Formstack Documents, PandaDoc, and HotDocs—all of which were variations on automating contracts to streamline workflows and increase efficiency).

[46] Nelson & Simek, *supra* note 37.

[47] Nelson & Simek, *supra* note 37 ("DLA Piper is using artificial intelligence software for due-diligence document review in mergers and acquisitions. The software searches text in contracts and then creates a summary and an analysis.").

[48] Lisa Angelo et al., *Examples of Artificial Intelligence Systems in Legal*, TXCLE-ADVANCED Family L. 30-V (2018).

[49] Dana Remus & Frank Levy, *Can Robots Be Lawyers? Computers, Lawyers, and the Practice of the Law,* 30 GEO. J. LEGAL ETHICS 501 (2017), SSRN, 1, 1- 2 (2015) (discussing the various examples of articles and literature that have been written on this robots taking over the role of lawyers). Another those in the camp concerned over the rise A.I. in legal practice warn that biases, deception, and malicious actions can occur in applying John Levin, *Big Data, Artificial Intelligence, and Legal Ethics*, CBA REC., 48, Apr.-May 2019.These individuals are that humans are still providing the codes and structures that make A.I. function, which can be a breeding ground for implicit bias that is even more difficult to uncover.

gender neutral nouns, or whether citations should be relegated to footnotes.[50] Similarly, some lawyers suggest that any use of legalese is unwise,[51] while others suggest that writing too simply makes a brief pedestrian.[52] And according to some appealing to emotion is foolish,[53] while opposing authorities emphasize storytelling as a means of persuasion.[54] So, who are we to believe? What styles dominate the upper echelon of legal writing, and perhaps more important, does writing style matter at all?

Because writing drives decision making, and as a result is one of the most valuable skills a lawyer can have, I started answering these questions using empirical methods to study writing style. The results are preliminary, yet promising. They suggest that with continued refinement of our methods, writing style and its implication on decision-making can be measured and understood.

This conclusion has implications for a variety of industries. For example, it suggests that companies that insure verdicts may produce refined analytical programs to better help them contemplate risk. It also suggests, that brief writers could use refined analytical tools to make their briefs better, potentially increasing chances of winning. For researchers, it suggests there is a great deal of interesting work we can do to develop tools and methods for examining persuasive legal writing more effectively. Finally, it suggests for those of us who teach legal writing that: (a) we can and should refine our teachings through the lens of hard data and; (b) that soon (or even now) we may provide tools to our students that will empower them to write better by leveraging technology.[55]

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[50] Antonin Scalia & Bryan A. Garner, Making Your Case: The Art of Persuading Judges (2008).

[51] *See, e.g.,* Nancy L. Schultz & Louis J. Sirico Jr., Legal Writing & Other Lawyering Skills 90-91, 93-94 (5th ed. 2010).

[52] *See* Mark Adler, The Oxford Handbook of Language and Law 67 (Lawrence M. Solan & Peter M. Tiersma eds., 2012) ("lawyers have historically believed that traditional legalese is more precise and "plain language represents irresponsible over-simplification"). One study in the English education field suggests that such skepticism may be warranted. Rosemary L. Hake & Joseph M. Williams, *Style and Its Consequences: Do as I Do, Not as I Say*, 43 Coll. Eng. 433 (1981). The experiment detailed that a group of college English teachers gave higher grades to papers with syntactically complex writing than to papers written simply. *Id.* The researchers inferred that the writers of simpler prose may have been perceived as naive and less intellectual than the writers of the complex prose. *Id.* at 50-51.

[53] Todd E. Pettys, *The Emotional Juror*, 76 Fordham L. Rev. 1609 (2007) (discussing a large number in the legal profession have come to believe "emotions undercut rational decision making").

[54] *See* Kenneth D. Chestek, *Judging by the Numbers: An Empirical Study of the Power of Story*, 7 J. Ass'n Legal Writing Dir. 1, 19–22 (2010), 7 J. Ass'n Legal Writing Directors 1, 19–22 (2010) (presenting empirical evidence that, as judges and lawyers progress in their careers and gain experience, they increasingly value the narrative in the case as a matter of persuasion). On appeal, it is not enough to simply craft a great legal argument. As Ninth Circuit Judge Alex Kozinski glibly notes, "[t]here is a quaint notion out there that facts don't matter on appeal-that's where you argue about the law; facts are for sissies and trial courts. The truth is much different. The law doesn't matter a bit, except as it applies to a particular set of facts." Alex Kozinski, *The Wrong Stuff*, 1992 B.Y.U. L. Rev. 325, 330. In other words, an appellate brief must tell a good story.

[55] This can give instructors guidance when expectations to teach successful writing are compounded with first having to teach basic writing skills. Sarah Valentine, *Legal Research as a Fundamental Skill: A Lifeboat for Students and Law Schools*, 39 U. Baltimore L. Rev. 173, 209-10 (2010). Firms are beginning to conform practice sectors around technology and adopt innovative procedures, but technology does not play an integral role in

Before turning to the study and its implications, it is helpful to first understand some existing literature, both anecdotal and empirical. The following section provides a look at "conventional wisdom" for legal writing. Thereafter, an examination of the various ways empirical researchers are studying writing by lawyers and by judges is undertaken. In particular, that section addresses studies that consider whether writing style, measured in a variety of ways, impacts outcomes.

2.1. WHAT THE LEGAL WRITING EXPERTS SAY

Because of the prevalence of unappealing legal writing and the importance of writing to lawyers' work, many legal writing experts give advice for stylish legal writing. Bryan A. Garner has written numerous legal-style books and articles.[56] Other classic legal-style texts include *Plain English for Lawyers*[57] and *Thinking Like a Writer*.[58]

The extensive literature discussing legal writing lacks a systematic analysis of the fundamental qualities of good legal writing. However, there seems to be a consensus among the legal writing experts that the chief qualities of good legal writing are clarity and conciseness.[59]

Legal writing experts emphasize clarity and the avoidance of legalese.[60] Justice Benjamin Cardozo explains, "there can be little doubt that in matters of literary style the sovereign virtue for the judge is clearness."[61] To echo this point, in their book *Making Your Case*, Justice Antonin Scalia and Bryan Garner claim that "one feature of a good style trumps all others. Literary elegance, erudition, sophistication of expression—these and all other qualities must be sacrificed if they detract from clarity."[62] As Garner further explains, "A lawyer should keep in mind that the purpose of communication is to communicate, and this can not be done if the reader or listener does not understand the

most lawyers' education, which is a hurdle for the firm and the law student pining for a job. Survey Report, Wolters Kluwer, The Future Ready Lawyer: The Global Future of Law (2019).

[56] *See e.g.,* Bryan A. Garner, Legal Writing in Plain English: A Text With Exercises (2001). Garner describes an aspect of "poor legal writing" is "mak[ing] law students pore over ream upon ream of tedious, hyperformal, creaky prose" and fostering "them to pomposity." *Id.* at xvii-xviii. Lawyers "learn [their] trade by studying reams of linguistic dreck—jargon-filled, pretentious, flatulent legal tomes that seem designed to dim any flair for language." *Id.*

[57] Richard C. Wydick, Plain English for Lawyers 3 (5th ed. 2005).

[58] Stephen V. Armstrong & Timothy P. Terrell, Thinking Like a Writer: A Lawyer's Guide to Effective Writing and Editing (3rd ed. 2008).

[59] *See generally id.*; Garner, *supra* note 56; Tom Goldstein & Jethro K. Lieberman, The Lawyer's Guide to Writing Well (1989); Wydick, *supra* note 57, at 58-60.

[60] Garner, supra note 56; Wydick, supra note 57, at 58-60; *see generally* Armstrong & Terrel, *supra* note 58; Tom Goldstein & Jethro K. Lieberman, *supra* note 59.

[61] Benjamin N. Cardozo, Law and Literature (1931), *reprinted in* Law and Literature and Other Essays and Addresses 7 (1986).

[62] Scalia & Garner, *supra* note 50, at 107.

words used."[63] Experts agree, mostly, that writing style full of intricate constructions and throat-clearing verbiage does not effectively persuade or connect the reader.

As many in the legal profession know, Bryan Garner is conceivably the leading legal writing expert, advocating for plain style in writing—clean, coherent, controlled, and commanding. Garner has likewise recommended that lawyers communicate their arguments in writing "honestly, clearly, unpretentiously," using a "natural voice."[64] He advises that lawyers use a "literate, precise, but relaxed style."[65]

Garner endorses the following as a "good test of naturalness: if you wouldn't say it, then don't write it."[66] He advises attorneys to "try reading your prose aloud" during editing "to see whether you'd actually say it the way you've written it."[67] Garner resounded this tactic in his book, *The Winning Brief*, where he offered 100 tips for the building blocks of brief writing.[68]

Garner argues that writing is effective and persuasive when clear, plain arguments are formulated in a concise manner.[69] "[T]he first and last secret of a good style consists in thinking with the heart as well as with the head."[70] Legal style is important and can affect the impression the writing leaves on the reader.

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[63] Bryan A. Garner et al., The Redbook: A Manual on Legal Style 183 (2d ed. 2002).

[64] *See* Bryan A. Garner, *An Approach to Legal Style: Twenty Tips for the Legal Writer,* 2 Scribes J. Legal Writing 1, 1 (1991) [hereinafter Garner, *An Approach to Legal Style*] ("Use words and phrases that you know to be both precise and as widely understood as possible."); *see also* Bryan A. Garner, *The Question of Voice How to Bring a More Conversational Style to Your Writing,* ABA. J. (Dec. 1, 2016), https://www.abajournal.com/magazine/article/garner_conversational_writing [hereinafter Garner, *The Question of Voice*]:

> The other day a lawyer asked me: "Isn't one of the hardest things about editing well learning to improve the writing while not changing the writer's voice?" I said no: When editing most lawyers' work, I have little regard for the writer's voice because most lawyers haven't cultivated a discernible voice. What all legal writers should strive for is to be the voice of reason.

[65] Garner, *An Approach to Legal Style*, *supra* note 64.

[66] Bryan A. Garner, *supra* note 56.

[67] *Id.*

[68] Bryan A. Garner, The Winning Brief: 100 Tips for Persuasive Briefing in Trial and Appellate Courts 226 (3rd ed. 2014) (discussing Tip #28: never write a sentence that you couldn't easily speak; "Try to get your speaking voice in your writing . . . In talking, you tend to use short sentences, plain words, active voice, and specific details . . ." (*quoting* Daniel McDonald & Larry Burton, The Language of Argument 238 (Houghton Mifflin 1986))).

[69] Garner also advises that judges and lawyers should place citations in footnotes to ensure that readers aren't getting lost in clunky citations or unwieldy string citations with long explanatory parentheticals, but he is strongly repulsed by the use of substantive footnotes, like this one. Garner, *supra* note 63, at 176-99 (elaborating on Tip 24-Put all your citations in footnotes, while saying in the text what authority you are relying on. But ban substantive footnotes).But *see* Richard A. Posner, *Against Footnotes,* Ct. Rev., Summer 2001, at 24, 24 (taking issue with Garner's suggestion that all legal writers put citations in footnotes when drafting briefs or opinions).

[70] Garner, *An Approach to Legal Style*, *supra* note 64 (*quoting* Arthur Quiller-Couch, On the Art of Writing 291 (1916)).

Although none of these "truths" sound objectionable, it is notable that Garner does not provide citations for these truths. Indeed, he likely cannot. The research does not exist. It would be unthinkable in other fields to shape such an important part of that profession's work on anecdotes. Structural engineers do not rely on their gut. And we do not want doctors performing surgery based on what other doctors say is effective. We expect measures, analysis, and best practices. Why should it be any different for legal writing?

2.2. EARLY EMPIRICAL RESEARCH REGARDING LEGAL WRITING

The study of legal writing using empirical methods is growing and is likely to continue.[71] With the continued development of software that can gather briefs, analyze them, and be coded to engage in a variety of analyses, there are amazing new avenues to explore. Entire articles have been written explaining new methods, exploring those methods, and providing early, tantalizing results.[72] The existing research covers a variety of topics, including how the use of "intensifiers" impacts outcomes,[73] whether readability (measured by a few common, simple readability scores) predicts outcomes,[74] and whether citations predict results. Other articles have engaged in a more ambitious and creative analysis. For example, one article treated each precedent by a Supreme Court justice as their "output" and then measured the influence of that output by how often those cases are cited. It used that data to measure which justices, and categories of justices, have the most influence.[75] Other papers examine Supreme Court decisions using simple measures, such as opinion length.[76] Specific to the instruction of legal writing, there is even a textbook that attempts to root instruction in early findings, rather than shared (but often unexamined) beliefs among legal writing teachers. The book, *The Science Behind the Art of Legal Writing*, draws on a variety of studies.[77]

[71] *See* Shaun B. Spencer, *Using Empirical Methods to Study Legal Writing*, 20 J. Legal Writing Inst. 141 (2015). In his article, Spencer discusses empirical research methods that contribute to the growing field of research. *Id.* at 184. He highlights just how empirical research positively adds to learning and developing legal writing skills. *Id.*

[72] *See* Chad M. Oldfather, Joseph P. Bockhorst & Brian P. Dimmer, *Triangulating Judicial Responsiveness: Automated Content Analysis, Judicial Opinions, and the Methodology of Legal Scholarship,* 64 Fla. L. Rev. 1189, 1238 (2012).

[73] *See* Lance N. Long & William F. Christensen, *Clearly, Using Intensifiers is Very Bad - Or Is It?*, 45 Idaho L. Rev. 171 (2008).

[74] *See* Lance N. Long & William F. Christensen, *Does the Readability of Your Brief Affect Your Chance of Winning on Appeal?*, 12. J. Appellate Prac. & Process 145 (2011).

[75] *See* William M. Landes, Lawrence Lessig & Michael E. Solimine, *Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges,* 27 J. Legal Stud. 271 (1998). (measuring the influence of particular judges based on the number of times their opinions are cited).

[76] *See* Ryan C. Black & James F. Spriggs II, *An Empirical Analysis of the Length of U.S. Supreme Court Opinions,* 45 Houston L. Rev. 621 (2008).

[77] Catherine J. Cameron & Lance N. Long, The Science Behind the Art of Legal Writing (2015).

2.3. FOCUS ON JUDICIAL WRITING

An article on Supreme Court opinion length examined the causes of increased opinion length, noted that that growth was not linear but exhibits periods of growth and contraction, and concluded that longer opinions – controlling for many other factors – are cited more often and carry more precedential force.[78]

Another article examined how citation of opinions could measure the influence which authoring judges had with his or her peers.[79] It reached several interesting conclusions, including that older judges were more influential than younger judges,[80] that law professors are among the most influential judges,[81] and that whether a judge had served as a judge in another court did not alter influence.[82]

Yet another article provided tantalizing data about how courts use, or ignore briefs.[83] The authors explored whether courts are "responsive" to the briefs they read in a variety of ways, including measuring how often they cite cases first cited by the litigants.[84] The results were surprising, for example, they found that just roughly one-third of total citations can be found in the appellant/appellee briefs in the Circuit they studied,[85] and that courts adopt reply briefs the least, raising questions as to why.[86]

[78] Black & Spriggs, *supra* note 76, at 634-40 (showing a dramatic increase in the Supreme Court opinion lengths in the second half of the 20th century in comparison to historical norms). "While the median length of the Court's majority opinions hovered around 763 words for the first twenty years of its existence, the same quantity more than quintupled to 4,250 words for the most recent twenty-year period." *Id.* at 634. A contributing factor of this increase may exist in Justices feeling compelled to justify their position to offer the best guidance in comparison to other opinions and even refute those dissenting opinions. *Id.* at 629 (Justice Powell stated that he "prefer[red] 'lean' opinions, but [[that] it is important to meet honestly and fairly the serious arguments advanced by the losing side or by a dissenting opinion.").

[79] Landes, *supra* note 75, at 271-72.

[80] *Id.* at 279-80.

[81] *Id.* at 288. Twenty percent of the top twenty judges were former law professors, including the first and third judge. *Id.*

[82] *Id.* at 318-19.

[83] Oldfather, *supra* note 72.

[84] *Id.* at 1195.

[85] *Id.* at 1238 ("On average, only 35% of the authorities cited in the court's opinions were among those cited by the parties, and the court cited just over 16% of the authorities referenced in the briefs.").

[86] *Id.* at 1195.

2.3.1. INTENSIFIERS

Long and Christensen examined whether what they call intensifiers[87] (words like *clearly*, *obviously*, *certainly*) impacted outcomes in appellate cases.[88] They noted that many legal writing instructors and many manual books on legal writing suggest that intensifiers should not be used. They cited Chief Justice Roberts, who has condemned the use of such words in Supreme Court briefs.[89] The study measured what the authors called the intensifier rate (number of intensifiers per page).[90] The results were interesting, but muddy. Intensifiers did not correlate to losing more often, although the data hinted at the result without being statistically significant.[91] But, surprisingly, the authors identified situations in which increased use of intensifiers correlated with a higher win rate.[92] This occurred when the judicial opinion also exhibits a higher number of intensifiers.[93] The authors are candid about the limitations of these results, concluding they cannot draw a causal conclusion.[94] An apparent and potential explanation of the data is simply that some cases are actually obvious and clear. The author does not lose credibility to point to this truth for the court. And if the court agrees, and perhaps even views the other side's position as borderline frivolous, it scolds them with intensifiers. In this way, one would expect to see increased intensifiers in the appellate brief *and* in the opinion.

Regardless of the final takeaway of the study, it is an example of how statistical analysis can attempt to measure the effectiveness of legal writing, and perhaps a cautionary tale of just how complicated the results can be.[95]

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[87] Lawyers' tendency to advocate in writing could lend to them using intensifiers (i.e. the lawyer really, really, really, wants to win for her client). *See* Elizabeth R. Frost, *Cutting the Clutter: Spring Cleaning for Writing*, 2013 Or. State Bar Bull. 15. ("Mark Twain, America's official authority on everything, advised writers to "substitute "damn" every time you're inclined to write "very"; your editor will delete it and the writing will be just as it should be.").

[88] *See e.g.*, Long & Christensen, *supra* note 73, at 180.

[89] Disapproving the use of the intensifier "clearly" in briefs for the Supreme Court, Chief Justice Roberts snarked that, if the case were that clear, it would not be before the Court. *Id.* at 172.

[90] *Id.* at 181.

[91] *Id.* at 173. "The degree of intensifier use by the writer of a legal brief is a function of the writer's perception of the strength of his or her own argument, relative to the opposing side's argument." *Id.* at 186.

[92] *Id.* at 181-82.

[93] *Id.* at 184, n. 55 ("It can even be argued that the high rate of intensifiers in judicial opinions, especially where the answer is not clear, serves as a model for high intensifier use by practitioners in similar situations.").

[94] *Id.* at 172.

[95] At any rate, correlation is not necessarily causation. However, the fact that intensifiers may correlate with losing briefs is enough to give a legal writer pause to avoid using language that lacks any real force or power. *See* Frost, *supra* note 87 (highlighting the unnecessary repetition in using the phrases "utterly convinced" and "very urgent").

2.3.2. READABILITY

Long and Christensen took on readability in a subsequent article. They used two common measures of readability[96] – the Flesch Reading Ease Scale,[97] and the Flesch-Kincaid Grade level scale.[98] Both scales function largely by measuring the length of words, and the length of sentences.[99] Shorter words and shorter sentences produce lower scores. Such scales have been roundly criticized as doing a poor job of measuring actual readability.[100] But the authors note they are not concerned about such criticism because they want to simply measure whether shorter sentences and shorter words correlate to better outcomes, reasoning that judges might find such sentences easier to read.[101]

The conclusion that "readability" does not correlate to outcomes would suggest appeals are decided on the merits, and that the method of delivery is largely irrelevant.[102] If this is true, it would suggest all lawyers should spend less time on how they write, and simply make sure the content is sound. The authors candidly suggest that readability may be "sound and fury signifying nothing."[103]

As explained in my results section, my findings are at least arguably at odds with this conclusion. Using more refined tools and measures, I conclude that some writing styles (which is a form of readability), do correlate with success. This is likely due to the difference in measurement tools. The "readability" statistics used by Long and

[96] *See* Long & Christensen, *supra* note 74, at 145.

[97] The Flesch Reading Ease scale (FRES) measures the readability of a text on a scale from 0-100 with higher scores indicating texts that are easier to understand: *FRES* = 206.835 - 1.015 Total Words Total Sentences - 84.6 Total Syllables Total Words *See, e.g.*, Rudolf Flesch, *A New Readability Yardstick*, 32 J. Applied Psych. 221, 223-33 (1948).

[98] The Flesch-Kincaid Grade Level (FKGL) measures the number of years of education typically required to read a text *FKRA* = 0.39 Total Words Total Sentences + 11.8 Total Syllable Total Words - 15.59. *Id.*

[99] *See* Norman O. Stockmeyer, *Using Microsoft Word's Readability Program,* Mich. Bar J., Jan. 2009, at 46. Both of these readability scales are found within Microsoft Word.

[100] *See* K.K. DuVivier, *Writing Help at Your Fingertips-Readability Scale*, Colo. Law, Mar. 2001, at 39.("The shortcoming of readability scales is that they can only measure the surface characteristics of words. They assume that reading is equivalent to understanding."). Duvivier explains that computers can count the number of words between periods with ease, but the real shortfall is a computer cannot distinguish citation sentences from grammatical sentences—the scales measure each period as the end of a sentence. *Id.* "Consequently, a citation sentence, such as 42 U.S.C. § 1983 (1994), is read as four short sentences, which can inaccurately boost a text's readability rating." *Id.*

[101] *But see* Long & Christensen, *supra* note 74, at 154.

[102] Although the study found no significant correlation between the readability and the success of the briefs, this conclusion could merely expose lower caseloads in a specific court and a larger number of law clerks to support appellate judges compared to the trial judges. Also, their conclusion could have been "impacted the logistic regression analysis, as the inferential logic requires variation in the dependent variable to draw a valid conclusion." see William D. Woodworth, *The Ethics and Science of the Legal Writing Art: An Interdisciplinary Approach*, 67 Syracuse L. Rev. 329, 341 (2017). *See also* Long & Christensen, *supra* note 74, at 156 (failing to control for other dimensions of narrative writing in the logistic regression).

[103] Long & Christensen, *supra* note 74, at 161.

Christensen are better termed "how-many-syllables-appear-in-a-sentence" tools, which are crude. For example, the word "intelligent" is far more understood and common than "apt". But the former would score as less readable than the second. Similarly, most people understand "phony" or "insincere" but might not know the word "glib." Beyond examples of short words, anything but simple or readable, the law complicates things further. Some legal words are terms of art. Failure to use them might shorten the sentence, but omitting the words would not improve the readability (or credibility) of the author. Finally, the Microsoft Word readability check scores legal citations as sentences.[104] The citations affect the readability score of the writing with the amount of punctuation.[105]

StyleWriter provides a more refined tool that measures how "readable" writing is in a variety of ways. This includes scoring words based on their generally accepted meaning, rather than their length. It also considers the use of active versus passive verbs, how often prepositional phrases are used, and the role of jargon.[106]

[104] *Id.*

[105] *See* Shaun B. Spencer & Adam Feldman, *Words Count: The Empirical Relationship Between Brief Writing and Summary Judgment Success*, 22 J. Legal Writing Inst. 61, 81 (2018). ("Removing the citations alleviates the risk that the awkward form of legal citation would undermine the reliability of the readability measures. When we took a small sample of briefs and ran several common readability tests with and without citations, the two sets of readability scores varied wildly and produced significantly different rank-ordering of the briefs.") Another factor to think about is the variation in the number or length of citations used. The citation lengths vary based on the number of sources cited and the various reporters used for any internal citation. *See also* Black & Spriggs, *supra* note 76, at 631 n. 36 ("[M]odern opinions are likely to cite several reporters for any given internal citation, whereas earlier opinions will have systematically fewer reporters because many did not yet exist."). Black and Spriggs compared the difference in total calculated length of the "original" opinion with the length of a "clean" opinion—to get this "clean" version the authors eliminated many of the citations within the opinion based on a list of about 150 reporter citation stems that appeared in their data. *Id.* The two authors found that prior to 1940, the "original" opinion "averaged roughly 65 more words than the cleaned version." *Id.* However, after 1940, the difference between the two versions of the opinion increased by a factor of approximately five, differencing about 315 words.

[106] I am not endorsing StyleWriter as the only tool that can do this work. But it proved effective for my needs. StyleWriter is one of the oldest writing analysis programs, and is currently in its fourth version. There are several alternatives to StyleWriter. For example, ProWritingAid and SlickWrite are similar to StyleWriter in that they produce reports which identify a variety of writing errors, i.e., alliteration, cliches, and poor word choice. These programs provide a readability score as well. PaperRater also seems to provide some similar analysis, but more limited in scale. It is also worth noting that there are other programs available that do not providing an analytical report of writing, but instead attempt to correct mistakes in real time. Wordrake, for example, is more business-writing based, edits for brevity and clarity, and is popular among lawyers. The Hemingway app will color code errors and offer corrections as a person writes.

3. THE PILOT EMPIRICAL STUDY

In this initial study, I sought to explore two core questions. First, I wondered whether, with refined tools, it was possible to better describe existing writing styles and differences among courts and authors. Second, I wanted to learn whether I could identify initial metrics that correlate with outcomes. I stress that this study is more proof of concept, than conclusive data. However, the results are promising, suggesting that with continued innovation we can more meaningfully measure writing styles, and learn what styles are the most effective. I explain the methods and results in the following sections. In these sections, I discuss a few potential uses of more refined measures of legal writing, and then I discuss some potential future studies that would develop and improve my methods to yield new insight.

When beginning my work, my core hypotheses were:

H1. *Writing style differs by court.*

H2. *The style at the United States Supreme Court is probably the most distinct, as those briefs are produced by some of the most highly respected and highly paid advocates in the country.*

H3. *In persuasive briefs, writing style matters. Content may be queen, but style is at least a princess.*

To investigate these hypotheses, I examined three courts of review—two final and one intermediate. Briefs are easy to gather for these courts, cases are randomly assigned to panels, and the overall load is small, meaning I could measure a large percentage of the workload.[107] I made a few other decisions to narrow and refine the work, which I offer as caveats here. Specifically, because my expertise lies in the civil realm, I focused the work on civil matters. I deleted cases with cross-appeals because they do not always produce a clear winner and loser, and I pulled only appellant opening briefs, scoring a reversal as a win. I selected 600 cases (200 from the U.S. Supreme Court, 200 from the Ninth Circuit Court of Appeals, and 200 from the California Supreme Court). To select the cases, I took the last 200 cases decided. I obtained the briefs in Word format, removed the materials that were not actual content meat (style, table of authorities, signature block), and scored the writing style of the brief's author.

To score the briefs, I needed a program that would produce meaningful, rich data. I tried existing tools in Word, but the metrics they produced were not refined enough for statistical work. For example, grade level was measured only to the whole grade (as opposed to the tenth or hundredth), making detailed differentiation difficult. The program had no settings for legal briefs, and it dealt poorly with things like citation. When I ran a first statistical analysis, it became clear that identifying meaningful

[107] The cases, information and measures are included in the Appendix.

differences would require data that could measure more aspects of writing and with more precision. Similarly, the reading level tests were overly simplistic.[108] After studying a variety of options, I settled on an innovative program called StyleWriter that measures specific writing characteristics, including:

a. average sentence—average number of words per sentence;
b. passive index—the percentage of sentences that contain passive verbs;[109]
c. style index—how well sentences are written as a whole, with a lower score indicating a better sentence;[110]
d. bog index—how easy sentences are to read;[111]
e. sentence bog—the length of the sentences;[112]
f. word bog—the difficulty of words;[113]
g. reading grade—the program eschews the familiar and relatively basic Flesh-Kincaid reading score and replaces it with a measure that considers the difficulty of the vocabulary, sentence length, and more;
h. jargon— overused and unnecessarily complicated terms, sometimes called "legalese";[114]

[108] In a pilot study, I selected one hundred briefs and scored them in Word. I then did some back of the envelope investigation about whether the measures might correlate with outcomes. I found no obvious correlations.

[109] *See New Features Guide: StyleWriter-4*, Editor Software 1, 11-12 (2020), https://www.editorsoftware.com/images/StyleWriter/StyleWriter4_New_Features.pdf. According to StyleWriter, the passive index measures one of the most common style faults in writing – overusing passive verbs. StyleWriter counts the number of passive verbs, divides them by the number of sentences and multiplies the result by 100 to give a Passive Index. *Passive Index* = Number of Passive VerbsNumber of Sentences × 100.

[110] Editor Software, *What is the Style Index?,* StyleWriter-4 Support (last visited February 7, 2020), http://www.editorsoftware.com/Faqs.html# (follow "Support" hyperlink; then follow the "What is the Style Index" hyperlink). StyleWriter indicates that "style" is a dated measure in its program. *Id.* It suggests that "Bog" is now a more complete measure. *Id.* For that reason, I've noted "style" but do not dwell on it. Here is StyleWriter's explanation:

> The Style Index was StyleWriter's measure of good writing before we designed the Bog Index. The Style Index measures all plain English problems in the text, including a weighted score for long sentences. It then converts this measure into an index. The best writing consistently scores below 20 – equivalent to two style faults for every 100 words. As the Bog Index also measures the plain English problems in the text, we recommend you use the Bog Index.

[111] *See New Features Guide, supra* note 109, at 15. According to StyleWriter, the Bog Index has three distinct parts, (1) Sentence Bog, (2) Word Bog, and (3) Pep. Bog is anything that detracts from easy reading (i.e. bogs a reader down). *Id.* Pep is anything that makes writing easier to read and more interesting (i.e. peps up writing). *Id. Bog Index* = [*Sentence Bog + Word Bog – Pep*].

[112] *A better readability formula: StyleWriter's Bog Index*, StyleWriter - USA (last visited Feb. 7, 2020), http://www.stylewriter-usa.com/stylewriter-editing-readability.php. [hereinafter *Style Writer's Bog Index*]. Sentence bog deals with the problem of sentence length. StyleWriter take the Average Sentence Length for the document, squares it, then divides the result by the Long Sentence Limit for the chosen Writing Task. This reflects the fact that some Writing Tasks demand shorter sentences. *Sentence Bog* = Average Sentence Length2Long Sentence Limit.

[113] *See New Features Guide, supra* note 109, at 20. Word Bog is the measure of word difficulty. StyleWriter's Bog Index measures: (1) word difficulty, (2) abbreviations and acronyms, (3) wordiness, (4) passive verbs, and (5) style issues. In measuring these factors, the program assigns a Bog value to each of these and expresses the result as the amount found in 250 words of the document. *Word Bog* = Style Problems +Heavy Words+Abbreviations+Specialist × 250 Number of words.

[114] *Id.* at 10. The StyleWriter program highlights three forms of jargon: (1) abbreviations and acronyms, (2) difficult words outside the understanding of most readers, and (3) jargon phrases.

i. glue—how well the sentences are pulled together;[115] and

j. pep—anything that makes writing easier to read and more interesting.[116]

The Bog Index is a better measure of readability because it captures the plain English attributes of writing (e.g., active voice, clarity), ather than presupposing that all words with multiple syllables are complex and less readable, as in computing the readability through Microsoft Word. The word familiarity used by StyleWriter determines the word complexity and is based on a wide lexicon of 200,000 words. Thus, the Bog Index measure of writing clarity overcomes the major criticism of other readability programs related to apprehending readability and complexity founded on syllable totals or passive verbs.

Besides these measures, I captured data regarding average word length and paragraph length. And to avoid confusion by citation or legal terminology, I set the program to "legal." The program still scored citation, but it did not count citation errors as such (or as a set of errors). Similarly, the legal setting did not flag all legal words as overly complicated, since many are terms of art. Admittedly, the setting was imperfect, but they were a marked improvement over many alternatives. To the extent it might still score some legal work poorly, those effects will probably be similar across the samples. Although the measures may contain errors compared to a hypothetical perfect scoring system for briefs, the relative measures between briefs are accurate.

Figure 1 is an image of how the output from a document appears in StyleWriter. The left side shows a visual depiction of a variety of measures. The right side shows notes, comments, and suggestions. The bottom left contains a measure of sentence length, along with distributing various sentence lengths. The very bottom shows the final raw scores for a variety of cumulative measures.

[115] *Id.* at 22.

> Glue words are the 200 or so most common words in the English language (excluding personal pronouns). They are necessary to link nouns, verbs, adverbs and adjectives in any sentence. Most writers use too many glue words and almost every document could benefit from running an editorial pen through unnecessary glue words.

[116] *See Style Writer's Bog Index*, *supra* note 112. Pep counts the features in the document that are the hallmarks of good writing. Pep reduces the overall Bog Index because it can ease the job of the reader and make the writing more enjoyable to read. Pep includes the following: names, interesting words, conversational expressions, personal pronouns, contractions, direct questions, and variation in sentence length. The program assigns a Pep value to each of the features listed and expresses the result as the amount found in 25 words of the document (1/10 of the effect from Bog). $\underline{Pep}$ = Names+Interest Words+Conversational×25Number of words+Sentence Variety $\underline{Sentence\ Variety}$ = Standard Deviation × 10 Average Sentence Length.

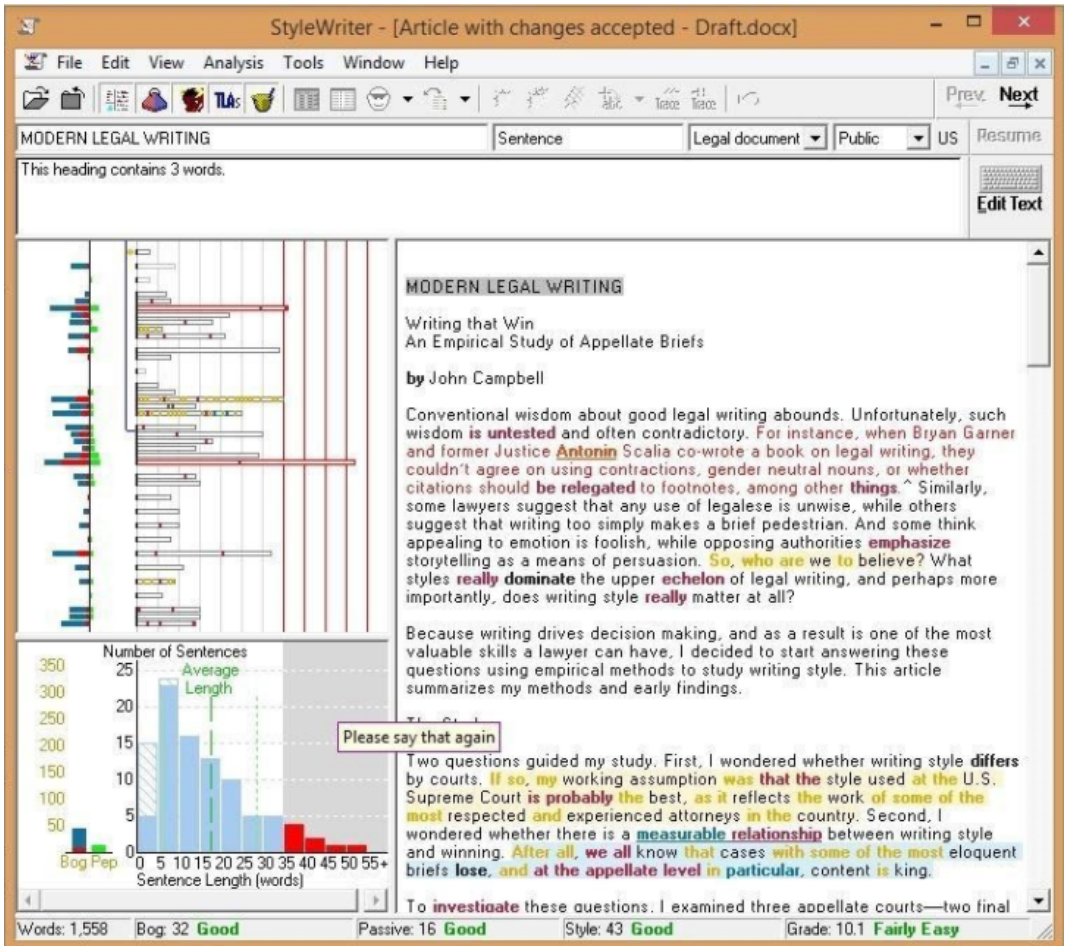

Figure 1: StyleWriter 4, Standard Edition developed by Editor Software Ltd (UK)

I recorded the data from each brief and analyzed it to determine whether: (1) the writing style in briefs differed by court; and, (2) any specific characteristic or combination of characteristics correlated at a statistically significant level with higher win rates. The data was analyzed using a variety of statistical measures and techniques.[117]

The results are discussed below.

[117] In determining whether courts were similar or different, we determined whether means and variances of the writing measures differ between pairs of courts in the three court data. The core steps required were: perform exploratory data analysis, plot densities of the writing measures for each court, assess the normality of the distributions of the measures in each court from the plots and using the Shapiro-Francia test, examine the correlations of the measures, compare the variances of the writing measures between pairs of courts, perform pairwise Brown-Forsythe tests on the measures between the courts as a non-parametric test of equality of variance, and report sample standard deviations to show direction and size of differences. We also examined whether writing characteristic correlated with positive outcomes by fitting logistic regression models of the case outcome on the writing measures of the brief. This required fitting models with each measure and the court identifier as predictive variables, examining the magnitude, direction, and significance of the association of the writing measure with the effect, identifying the best subset of predictors according to the A.I.C criterion, examining the predictive power of this model, and using a permutation test to assess the significance of the model.

3.1. UNITED STATES SUPREME COURT BRIEFS ARE SIMPLER

In this section, I have discussed my findings regarding how briefs compare across the selected courts of review. My fundamental findings challenge the existing notion that briefs are about the same is inaccurate. With a more refined measure, small, but statistically significant differences can be identified. This confirms my first hypothesis.

In a previous work, Long and Christensen concluded, using basic readability statistics, that briefs are all about the same.[118] That is not true when the tools are refined. Briefs differ at a statistically significant level from court to court, as shown in the charts below.

The differences show up in almost every style measure. The charts, Figures 2, 3, and 4 below demonstrate the differences.

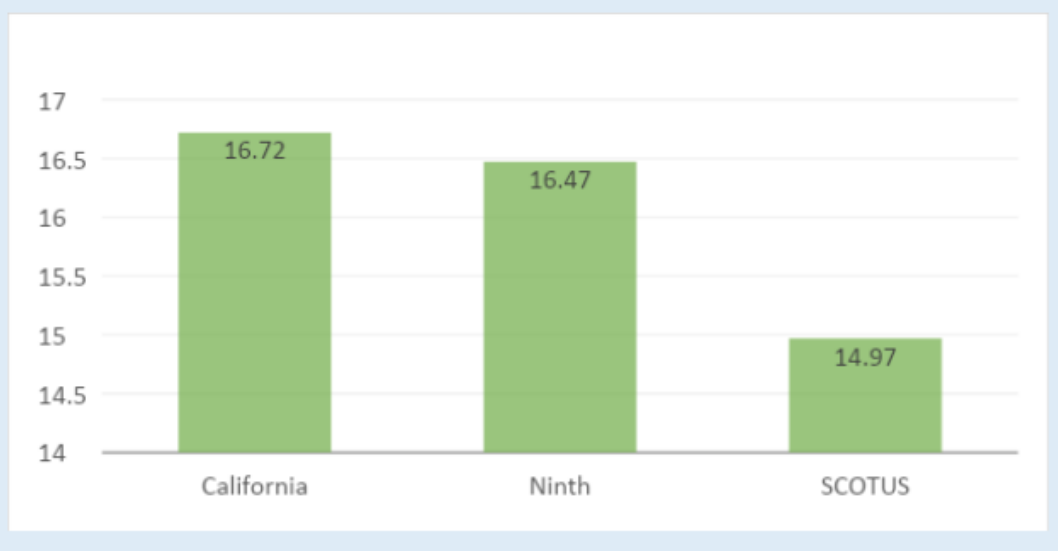

Figure 2

[118] *See generally* Long & Christensen, *supra* note 74, at 147.

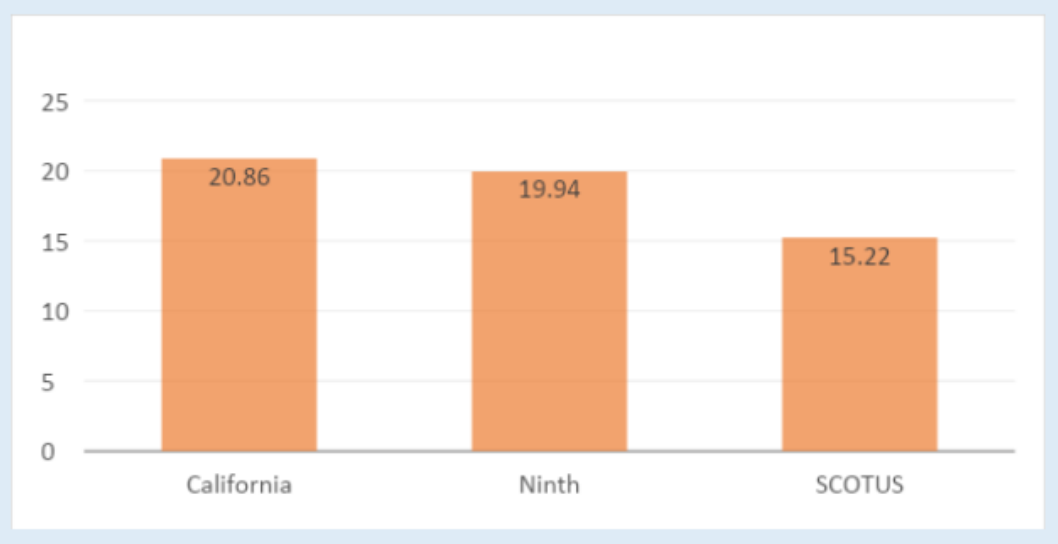

Figure 3

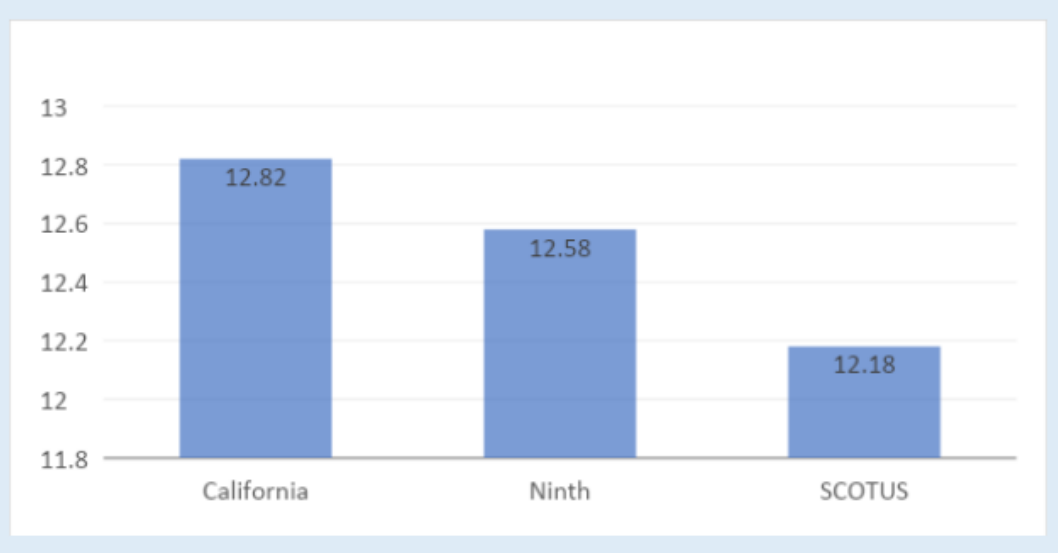

Figure 4

These are merely descriptive statistics, and the differences are, sometimes, small. For example, the difference in reading level between the United States Supreme Court and the California Supreme Court is only 0.60. To investigate whether these differences are statistically significant, a T-test was conducted.[119] The results are displayed in the table below.

[119] A t-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups, which may be related in certain features. A t-test is used as a hypothesis testing tool, which allows testing of an assumption applicable to a population.

Average scores with pairwise t-tests of equality of the means						
Measure	California	Ninth	SCOTUS	California v. Ninth	California v. United States	Ninth v. United States
Total words	8770.97	7334.07	12111.49	0.0000	0.0000	0.0000
Average sentence	16.72	16.47	14.97	0.3926	0.0000	0.0000
Passive index	20.86	19.94	15.22	0.1663	0.0000	0.0000
Style index	83.97	79.89	79.73	0.0069	0.0034	0.9117
Bog index	70.17	70.38	67.67	0.8436	0.0087	0.0096
Reading grade	12.82	12.58	12.18	0.1021	0.0000	0.0020
Jargon	0.0338	0.0404	0.0390	0.0000	0.0001	0.3648
Glue	0.4036	0.3934	0.3983	0.0001	0.0211	0.0289
Pep	12.21827	12.50	12.96	0.1197	0.0000	0.0039

Table 1: Comparing the court

The average scores for each court are reported in the first three columns. The lower the number, the simpler the brief. For example, the Bog Index score for the United States Supreme Court is 67.67, almost three points lower than the scores of the other courts. The light blue boxes indicate the simplest briefs, and the darker the box, the more complex the briefs. A visual inspection shows that the U.S. Supreme Court briefs are the least complex in most categories, and briefs in the California Supreme Court are the most complex. For the statistically minded, the last three "t-test" columns show whether the differences are statistically significant. The darker the green, the more significant the differences. White boxes indicate no significance. Scores below .05 are statistically significant. For example, in the far right column, the scores for the United States Supreme Court are compared to those of the Ninth Circuit. Almost all scores are far below .05. The differences between the U.S. Supreme Court briefs, when compared with the Ninth Circuit and California Supreme Court, are statistically significant for the majority of categories. The differences between the California Supreme Court and the Ninth Circuit are not statistically significant for most categories.

The U.S. Supreme Court briefs were, on the whole, simpler and clearer. Average sentence, passive index, bog index, style index, and reading grade[120] registered the simplest (lowest) scores. The briefs also scored best (highest) on pep, and were in the middle on jargon and glue. This confirms my second hypothesis.

The fact that the Supreme Court briefs are simpler might be surprising. The U.S. Supreme Court has a light caseload, the Court hand-picks the cases to hear, each justice has four clerks to assist them, the issues presented are all important, they are briefed by some of the largest firms in the country, and the average attorney has decades of experience. We might expect this to produce an advanced diction, complex sentences, and more focus on

[120] The reading level is driven down by citations. In experimenting with the program, I found that if I deleted citations and scored the same text, I often saw a grade level increase in reading level. Many other scores, including bog (considered a more complete measure of writing by StyleWriter) remained roughly the same. As such, it is possible that the reading grade level is driven down in the United States Supreme Court by heavy citation.

content than on style. The Court has plenty of time to discern the meaning of the briefs, and the issues themselves are complex. Instead, we see the opposite: style matters, and simplicity and clarity are the norm.

3.2. WRITING STYLE CORRELATES TO WINNING

But do simpler briefs win more? This answer is a little more difficult to discern from the data, but there are indications that it correlates significantly with winning. The scores from all briefs in all courts were considered, no single writing measure was a significant predictor of a successful outcome for the appellant. Statisticians typically want to see a "p-value" of less than 0.05. This can require a massive sample, as a "p-value" reflects both how much of a difference variables make and the number of data points. But, based on the briefs cases studied, there is trending evidence that good writing correlates to winning.

Table 2 shows the coefficient of each writing measure and its "p-value". A positive coefficient means that a higher score is associated with a greater probability of winning. Conversely, a negative coefficient indicates that a lower value of the measure is associated with a greater probability of winning. So, we would expect to see positive numbers for glue and pep (all indicia of good, clear writing), and lower scores for jargon, passive index, style, reading grade, and bog (all indicia of muddled, boring, or confusing writing). And this is just what we see.[121]

Summary of regressions with court indicator and single writing measure		
Measure	Coefficient	p-value
Average sentence	0.0056	0.8669
Passive index	-0.0182	0.2031
Bog index	-0.0133	0.1179
Reading grade	-0.0607	0.3565
Jargon	-6.8579	0.2457
Glue	3.1202	0.3919
Pep	0.0745	0.1490

Table 2

Here, we see that lower passive index scores, bog index scores, jargon, and reading level all correlate to better outcomes. The results are not statistically significant, but the "p-values" are much lower, suggesting a larger sample might yield statistically significant

[121] Average sentence length is a variable that doesn't fully fit my predictions. Longer sentences correlated with winning, though not at a statistically significant level.

results.[122] We also find that glue and pep correlate with positive outcomes, again with relatively low "p-values". The finding that does not fit the hypothesis is the measure of sentence length. It suggests that longer sentences correlate with winning, but the results produce a tremendously high "p-value", suggesting this result is likely just noise in the data. The data suggests the fact that good writing matters, but it is far from conclusive.

To further analyse, I hypothesized that, if writing does matters, it probably matters more in intermediate courts where the workload is higher, the issues are more mundane, the review is mandatory, the judges have less help from clerks, and on average, more cases are affirmed. There, the quality of writing style might have a significant impact on whether the brief is well received and understood because these courts aren't likely to have the time to dig through convoluted writing to uncover the deeper meaning. If this hypothesis is right, of the courts I studied, style should matter most in the Ninth Circuit.

And it did as in the Ninth Circuit, a low passive index correlated significantly to win rate, with a low bog index coming close to statistical significance.[123] This means that, in the Ninth Circuit, if you knew only the scores for passivity and bog, you could predict whether a case would be reversed or affirmed at a rate a little better than chance.[124] Being able to predict case outcomes on so little data is perhaps surprising, given one would know nothing of the issues, the firm, the attorney, the panel the case was assigned to, the quality of the content, the framing, or how oral argument went. Many might predict that without measuring content, or lawyer skill, prediction is impossible. But the data does not suggest that is true.

[122] P-values help decide if an effect is statistically significant. The smaller the difference observed, the larger the sample must be to be sure that the effect is real. For example, if you flip a coin 100 times, and get 51 heads and 49 tails, you cannot conclude the coin is unfair and slightly favors heads. The difference in the results is too small. But if you flipped it 10,000 times, and had 5,100 heads and 4,900 tails, the effect is likely real. The coin is probably imbalanced and favors heads. A p-value quantifies this idea, by considering the effect and the size of the sample. Here, in the data we see relatively low p-values, consistent with our other results. It is very possible that if we increased our sample, the differences we measured would persist, and they would test as statistically significant.

[123] I note here that at least one result across courts that I discovered was a bit confusing, at first glance. I found that overall, a higher style score (meaning the style is not good), correlated with winning. That is at odds with my overall findings. However, upon investigation, I learned that StyleWriter largely moved away from the style score, viewing the Bog index score as more complete. It kept the number because clients were used to it, but explained the Bog index score was a far better measure. The style score, it appears, may be driven higher by citation in legal writing, making it an unreliable measure for this study.

[124] The model only improves on chance by about 2%. But that is not surprising here, as there are large number of other potential explanatory variables that have not been coded or analyzed. In future work, with more detailed analysis, a combination of content analysis, style analysis, and consideration of other factors could combine to produce tools that successfully predict outcomes at a rate far in excess of chance. As discussed in this article, that has far reaching implications for a variety of industries.

Ninth Circuit Analysis		
Court coefficent	Estimate	p-value
Passive index	-0.0733	0.0079
Bog index	-0.0257	0.1226

Table 3

These findings suggest that writing style matters. Indeed, style alone can be used to predict outcomes – suggesting it either matters independently or that it somehow correlates heavily with other factors that drive resolution. If writing matters in the Ninth Circuit, it might be expected to matter even more in trial courts, where judges have more work, less time to dive into issues, and are therefore more reliant on briefs and the explanations provided by parties. I plan to test this hypothesis in a future study. That data will reveal whether, as court workloads increase and the issues become less earth-shattering, the importance of writing style increases.

4. IMPROVING THE METHOD AND TOOLS AVAILABLE

My early results suggest that precise measures of legal writing style are possible. The data also suggests that when we measure legal writing precisely, the style of legal writing can predict outcomes.[125] But, understanding whether legal writing style correlates with outcomes, or has a causal effect on them, requires better tools and replication.

With regard to refined tools, one could imagine a program developed specifically to measure legal writing. I hijacked a tool designed to make sure writing is clear and simple, however, a tool specifically designed to measure legal writing could identify citations, and, either exclude them from the measures, and/or count them effectively, as another metric to use when considering how writing style relates to outcomes. A legal-writing-specific analysis tool could identify legalese and differentiate it from terms of art. For example, it might treat "heretofore" as legalese, while viewing "proximate cause" as a term of art. This tool could be adjusted to consider elements like the frequency of headings, overall length of sections, whether an introduction is included, whether the writing contains intensifiers, and much more. This would provide additional real measures to potentially gain new insights into legal writing and persuasion.

[125] As noted *supra*, the most powerful predictive software will marry measures of style with measures of content and other factors.

Beyond a more refined tool to measure legal writing, future studies (mine and others) need to code for more information both to identify other explanatory variables and to more fully consider correlation versus causation. For example, I did not code my data for firm size, years of practice experience, past appellate wins, or several other characteristics that could explain the outcomes. And I did not measure legal content, which might be possible using some of the software discussed earlier in this article. Doing so would provide a whole new round of descriptive statistics and provide new answers to interesting questions. Do solo practitioners write differently than big firm lawyers? Do appellate attorneys with more years of experience change how they write? Does quality of content correlate with quality of style? And so on.

Similarly, one could imagine that what matters most in persuasive writing might be the delta between the two briefs. The process is adversarial, so maybe writing style matters most when there are pronounced differences between the two sides?[126] Or maybe writing style matters because it works better when it correlates with the "house style" of the court reading it. Or maybe, writing style is a proxy of sorts – a signal that correlates with more time spent on briefs, or more careful research, or more attorneys to work on the brief.

This merits further exploration. I hope the growing ranks of empirical legal researchers will, occasionally, focus their powerful tools on persuasive legal writing. And, as discussed below, I am virtually certain that even if they do not, venture capital will. There is a massive untapped market in legal writing.

5. IMPLICATIONS FOR THE PROFESSION IN THE FUTURE

Evolution in the ability to measure persuasive legal writing effectively and to understand its impact on outcomes will have broad impacts in a variety of fields, including software development for lawyers, insurance, legal finance, and the teaching of legal writing. I briefly discuss each below.

[126] In my first round, I scored the briefs of both sides for 200 briefs. We measured the delta between various writing measures and looked for any patterns or evidence that differences in style explained outcomes. We found no such evidence, but the work was preliminary and would benefit from further innovation. It is also possible that such differences would be far more pronounced in trial courts where there is likely to be both more variation and more importance placed on easy-to-read briefs, given the workloads of many courts and the relative lack of help. For example, in many state courts, judges have no clerks and make decisions on their ownunder significant time pressure.

Software Development: As tools for measuring persuasive legal writing are developed, as we understand how those measures relate to outcomes, text analysis software will become common place. If data reveals certain characteristics of persuasive writing cause better outcomes, it will become malpractice to fail to measure an attorney's work against the identified thresholds. Just as many companies inspect all written text they plan to publish with StyleWriter before they allow it to be released, one can imagine a day when law firms demand all briefs are "scored" using software before the briefs are submitted.

Small firms may buy software. Even today, a firm I am familiar with regularly uses a style software to measure briefs before they are filed. Large firms may well hire programmers and people trained in empirical methods to develop proprietary, in-house software. In a competitive legal market where big firms often compete with one another for clients, marketing that all persuasive legal writing is refined with proprietary software proven to improve results may produce a real edge.

The best software will not be static, either. It will deploy machine learning, a form of A.I., to constantly improve and update. A sophisticated, large firm could score all briefs, and then require that attorneys enter the outcome when the judge rules. The software would, over time, refine its algorithms, allowing it to provide evolving "advice". In large enough firms, with adequate time, such advice might even differ by court or by judge.

Insurance: Insurance for verdicts is a growing sector. When an attorney in a civil case obtains a large verdict, companies often approach the firm and offer the opportunity to insure the verdict. For example, if a plaintiff obtains a $10 million verdict, the company might offer to insure the verdict for $2 million. The plaintiff pays $2 million, and for that, they are guaranteed even if they lose, they receive $10 million.[127] This insurance works like all insurance – the company is estimating a claim, and then pricing across a book of cases. But how the insurance company scores reversal is harder to know. At a minimum, it involves evaluating the track record of the attorneys, the strength of the legal positions, the makeup of the reviewing court, the reversal rates from that court and more. The insurance companies could wait to offer insurance until opening and appellate briefs are filed if they wished, and gain an additional data point by scoring those briefs. Or, the insurance company could insure, but only upon a requirement that the submitted briefs are scored and pass various benchmarks shown to correlate, or partially cause, better outcomes.

Legal Financing: The number of businesses, attorneys, and banks willing to invest money in cases in exchange for a generous return on the investment is increasing and

[127] Some insurance companies I've encountered have far more complex formulas, for example providing sliding percentages of guaranteed recovery based on the premium. But I offer the example above for simplicity.

becoming mainstream. Websites like lexshare.com allow anyone to read about a case, investigate its strength, and then invest in exchange for a promised return if it settles or results in a favorable verdict.[128] Similarly, several funds have been established on Wall Street that invest in cases, and the American Bar Association has documented the growth of legal finance companies.[129] Those companies operate in several ways, but the two principal ways are: (a) to monetize existing legal assets (such as paying money to a company now based on its pending legal cases), or (b) loaning money directly to lawyers to fund their ongoing litigation (in which case the loans are often secured by a book of the lawyer's existing business).[130]

Companies in legal finance require detailed information to evaluate investments, and they typically require various forms of routine and regular updates on litigation. They hire lawyers and others to evaluate risk and to decide when and how to invest.[131] Much like the insurance section, software that scored persuasive legal writing and improved outcomes would be invaluable. Massive funds like Burford Capital, a legal finance company that has $3.3 billion to invest in legal matters, could develop its own software as a proactive way to improve its returns.[132] Or, it could at a minimum use existing software to score the work of firms and cases it invests in, including requiring all briefs filed to meet certain benchmarks.

Teaching Legal Writing: Perhaps the most promising innovations from improved measure and analysis of legal writing will occur in the teaching of legal writing. For centuries, legal writing has been taught based on hunches, personal experience, and instincts. Some schools relegate legal writing to adjuncts, who may be competent writers, but who may not have the time or training to consider the science of writing. Still others allow students to teach the course. Outside the academy, people like Bryan Garner have made millions of dollars selling legal writing advice based on their informed guesses about what works. And law professors, including me, often teach students the "truths" of legal writing. But I have learned when sitting in meetings and conferences with other legal writing teachers that my "truths" not always align with the truths of

[128] *See, e.g.*, LexShares, https://www.lexshares.com/cases (last visited Feb. 14, 2020).

[129] *See also* Mary E. Egan, *Other People's Money: Rise of Litigation Finance Companies Raises Legal and Ethical Concerns*, ABA J. (Dec. 1, 2018), https://www.abajournal.com/magazine/article/litigation_ finance_legal_ethical_concerns.

[130] *Id.*

[131] *See, e.g.*, Pravati Capital, https://pravaticapital.com/litigation-funding-services/ (last visited February 14, 2020) ("At Pravati Capital, the key to our success is in identifying cases that we know have a great chance at winning. When a large or small law firm brings its high probability cases to Pravati Capital, and our team of expert underwriters verifies precedent and likelihood of success, we invest in the case—and the firm—with a non-recourse cash advance or line of credit against the anticipated settlement.").

[132] Brian Baker, *In Low-yield Environment, Litigation Finance Booms*, MarketWatch (Aug. 21, 2018), https://www.marketwatch.com/story/in-low-yield-environment-litigation-finance-booms-2018-08-17.

others, and vice versa. The same is true when I co-counsel with others on appellate briefs, or when I attend conferences for appellate lawyers. We all think we know what works – but we cannot all be right.

Data can clear this fog. With enough studies, we can *know* what works, and teach it. This is true for all teachers. Senior partners, people like Garner, and law professors would benefit immensely from empirical measures and analyses of persuasive legal writing. It would move the teaching from the twentieth century (to be generous) into the twenty-first century.

One could also imagine using advanced legal writing software as one method of "scoring" student work. Instead of deploying teaching assistants to check grammar and citations, sophisticated textual analysis software would do the work in seconds and produce a detailed report for the student. Although this technology could certainly measure writing style, one could also imagine a future in which it measures both style and content, producing a detailed report of which cases were cited, how that compares to the class as a whole or a model brief, along with a variety of measures of the style.

The natural outflow of this would be that students would adopt the software to improve their writing. Microsoft Word checks spelling and grammar. Many of us could not live without those red and blue lines. And students deploy Word to improve their work. The same will almost certainly become true with advanced software that measures legal writing. Students will deploy it to improve their own writing, making their work faster and less tedious, while improving its overall content. They could even compare their style to the leading styles in high courts, or the courts of their state. This would increase the quality of the work rapidly, and free up time to talk about more complex issues that cannot, at least to date, be automated.

CONCLUSION

In ten years, a legal writing textbook will not be filled with quotes from judges or anecdotes by lawyers. It will illuminate readers with charts and graphs and data, and in doing so, it will move the way we think about legal writing away from intuition and towards irrefutable findings. The continued evolution of legal research tools, the overlapping use of textual analysis tools to measure brief content, and a new set of tools to measure writing style will merge to produce new insights.

Efforts to study effective legal writing style remain in their infancy, but that is changing fast. In the next ten years, the measure of persuasive legal writing style will become more precise, more powerful, and more predictive. As it does, long unanswered questions about the role of style, and the ideal approach to persuasive legal writing will emerge. At first, those may be general answers. But as technology improves, and researchers and firms alike begin to measure thousands upon thousands of briefs and track them against outcomes, the lessons will slowly become more granular. This progress will be accelerated by A.I., and in particular, machine learning. Briefs will be analyzed, and results tracked. The machine will learn. It will refine its suggestions for writing, and lawyers will adapt. And as they do, the feedback cycle will accelerate. Those of us invested in creating legal writing, and in teaching it, should embrace the change. It is an opportunity to challenge our own assumptions, and in doing so, become better.