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IS THERE ANY SCIENCE BEHIND
THE ART OF LEGAL WRITING?

Lance N. Long*

I. INTRODUCTION

Once upon a time there was a legal writing professor who wrote a book with one of his colleagues called *The Science Behind the Art of Legal Writing*. He was excited to write the book because he had completed science-based research within the field of legal writing, including empirical studies that compared language usages and patterns in appellate court briefs with a party’s success on appeal. Although he thought there must be many other scholars who had written similar empirical analyses on various aspects of legal writing, he was motivated to write the book to provide his legal writing students a single resource that would address scientific reasons for the writing conventions he taught them. On a more personal level, he wanted to better understand the scientific bases underlying what he taught.

A funny thing happened while he was researching; he did not find very many legal writing studies. Nevertheless, he and his colleague wanted to continue the project and finish the book. They were forced to utilize a variety of social and cognitive psychology studies oriented toward primary, secondary, and undergraduate students, as well as studies of non-legal professions. Even when

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they found studies directly addressing legal advocacy, the studies were focused on oral, rather than written advocacy. Ultimately, the book was not a compilation of as many legal writing studies as the authors had hoped, and the authors were forced to live somewhat less than happily ever after.

This story, of course, is real. It is told as a fairy tale because, even though there is a scarcity of empirical and scientific research addressing the field of legal writing, some of the scant empirical evidence that does exist suggests that storytelling, or narrative, is a superior format for promoting reader interest and comprehension. But, this article is not about any particular aspect of empirical legal writing research, and it is not about *The Science Behind the Art of Legal Writing.*

Instead, this article posits that empirical and scientific studies of legal writing are a necessary, but largely absent, area of legal writing scholarship. Part II of this article describes the current status of empirical and scientific studies specifically addressing legal writing. Part III reminds readers that, despite their usefulness, empirical studies are not the absolute panacea to the dearth of science-based legal writing scholarship. Part IV explains, using specific examples, why science and empirical studies specifically addressing legal writing are necessary. Finally, Part V urges scholars to engage in science-based legal writing scholarship in order to fill the void.

II. “What Is and What Should Never Be”

When I wrote *Clearly, Using Intensifiers Is Very Bad—Or Is It?* with William Christensen in 2008, I strongly suspected that nobody had written an empirical analysis about intensifier usage in appellate briefs. However, I did not expect to find that only a few articles had ever been written applying statistical analysis to legal writing. By the time I was completing the research for *The Science Behind the Art of Legal Writing* in 2013, I knew that there was little science-based analysis directly addressing any aspect of legal writing. My co-author, Catherine Cameron, and I were forced to expand our search—much more than expected—into studies of non-legal writing. Although we would have completed that research anyway, it left us feeling slightly unsatisfied with the end product. We were forced to extrapolate from studies involving kindergarten through high school writing

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4 See, e.g., Kenneth D. Chestek, Judging by the Numbers: An Empirical Study of the Power of Story, 7 J. Ass’n Legal Writing Directors 1 (2010).
5 Led Zeppelin, *What Is and What Should Never Be* (Atlantic Records 1969) (“And if you say to me tomorrow, oh what fun it all would be. Then what’s to stop us, pretty baby. But what is and what should never be.”).
6 See Intensifiers, supra note 2.
and undergraduate writing, which, as explained in Part IV below, is not an ideal method for establishing helpful advice for legal writers.

Recently, I came across an article that grabbed my attention entitled Using Empirical Methods to Study Legal Writing by Shaun B. Spencer. The goal of the article was “to promote an emerging field of legal writing scholarship: the empirical study of legal writing.” I believe the article accomplished that goal. For me, one of the most interesting aspects of the article was its inclusion of an appendix called “Empirical Studies of Legal Writing.” The appendix was interesting because it listed the “existing” legal writing studies. Although it did not expressly claim to be comprehensive, Professor Spencer found twenty-seven studies. Of the twenty-seven studies, fifteen were empirical analyses of legal writing and the remaining studies merely referenced or discussed empirical analyses. While the list may have missed a few articles, Professor Spencer confirmed what I already knew: Currently, there are very few scientific studies pertaining to legal writing.

### III. Caveat Lector

Before I jump into a discussion of why we need more science addressing legal writing, a word of caution is warranted. A recent article in the Chronicle of Higher Education described a large study called the “Reproducibility Project.” During the study, 270 researchers attempted to replicate, as closely as possible, one hundred psychology studies previously published in leading psychology journals from 2008. Unfortunately, “only [thirty-nine] percent of the studies withstood that scrutiny.” The study’s leader, Professor Brian Nosek, admitted the results were disappointing, but not entirely surprising.

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8 Spencer, supra note 7, at 141.
9 See Spencer, supra note 7, at 185–88.
10 See Spencer, supra note 7, at 142, 185–88.
11 See Spencer, supra note 7, at 185–88.
12 See Spencer, supra note 7, at 185–88.
13 See Spencer, supra note 7, at 185–88.
15 Id.
16 Id.
17 Id.
The culprits aren’t limited to any one particular discipline—they come from medicine, psychology, physics, chemistry, and other disciplines. While fraud is not new and there are examples of leading authorities committing research fraud dating back decades, more attention has been placed on rooting out fraudulent studies and implementing safeguards to prevent, or at least limit, further publication of fraudulent articles.18

Scholars have been questioning the validity of research results for years, and researchers have claimed, through statistical analyses, that most research results are false:

In a now-famous paper, John Ioannidis, an epidemiologist currently at Stanford School of Medicine in California argued that “most published research findings are false,” according to statistical logic. In a survey of 4,600 studies from across the sciences, Daniele Fanelli, a social scientist at the University of Edinburgh, UK, found that the proportion of positive results rose by more than 22% between 1990 and 2007 . . . . Psychology and psychiatry, according to other work by Fanelli, are the worst offenders: they are five times more likely to report a positive result than are the space sciences, which are at the other end of the spectrum . . . .19

Researchers point to several possible causes for the number of false research findings. These possible causes include the pressure on academics to publish in order to obtain a job, promotion, or tenure; the difficulty in achieving the desired results in a study; the ease of getting away with fraud; and “the so-called file-drawer effect, in which researchers perform an experiment multiple times but only publish the exceptional successful attempt.”20


20 Bartlett, supra note 14.
The case of Diederik Stapel, or the “Lying Dutchman,” is one of the most famous cases of fraudulent research:

Stapel, a Dutch psychologist who became dean of the School of Social and Behavioral Sciences at Tilburg University in the Netherlands, published over thirty studies in which he admitted to completely fabricating the data used to achieve his desired results. His articles “on the effect of power on hypocrisy, on racial stereotyping and on how advertisements affect how people view themselves” were published in many journals, cited by numerous media outlets and scholarly articles, and launched him to become a highly regarded “academic star” around the world. In an interview, Stapel “described his behavior as an addiction that drove him to carry out acts of increasingly daring fraud, like a junkie seeking a bigger and better high.”

Professor John Bargh, one of the originators of priming research, which “demonstrates how subliminal prompts can make you do all manner of crazy things,” received significant scrutiny and criticism when the studies could not be replicated. However, he stood by his results and claimed that those attempting to replicate his studies did not possess the unique skills necessary to design an effective experiment. To date, all fields of science, especially psychology, are struggling to determine how to avoid false research results.

The possibility of having your research challenged may cause you to question whether engaging in empirical analysis of legal writing is worth the trouble. For example, in May 2015, the New York Times published an article discussing a forthcoming law review article that I suspected reexamined an earlier study conducted by William Christensen and me. A year earlier, one of the authors of the upcoming law review article asked me about our data and methodology. When I looked up the article I saw it was structured to replicate


23 See Yong, supra note 19.

24 See Yong, supra note 19.

our previous study,\textsuperscript{26} which claimed that the Supreme Court Justices wrote more defensively in dissenting opinions.\textsuperscript{27} The article stated:

> We re-ran the analysis from Long and Christensen on our larger dataset to see how well their findings held up . . . . A paired t-test was then run to determine whether there was a statistically significant difference in means for either grade level or intensifier use. Tracking Long and Christensen, we found that majority opinions had somewhat higher grade levels, but that difference was not statistically significant.

\ldots

The paired t-test on intensifier use also confirmed Long and Christensen’s findings. There was a markedly higher use of intensifiers in dissents, with means of 0.13% of words for majority opinions and 0.18% for dissents. The t-test revealed a high degree of statistical significance between the means.\textsuperscript{28}

After reading the article, I breathed a sigh of relief as our findings had been validated, even with a much larger data set.

Professor Cameron and I were particularly concerned with claims of false research because we relied upon many social and cognitive psychology studies, and not merely legal-centric studies. While we tried to use good studies and we warned our readers about the possibility of bad or skewed research, we realized that the risk of relying on bad studies must be accepted if one believes that social science studies are helpful to better understand legal writing.

**IV. WHY WE NEED LEGAL WRITING SPECIFIC SCIENCE**

If the possibility of having your research invalidated does not deter you from engaging in empirical research, then you may ask yourself, “Why does it matter?” The following examples illustrate why empirical research matters.

**A. The Pew Research Center and Stanford Studies**

The first example involves an ongoing debate in the legal academy as to whether electronic communications (e.g., texts, tweets, and emails) affect current

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{27} See \textit{When Justices (Subconsciously) Attack}, supra note 2.
\item \textsuperscript{28} Carlson et al., \textit{supra} note 26 (manuscript at 22–24) (citations omitted).
\end{itemize}
\end{footnotesize}
law students’ ability to communicate effectively through formal writing. Are they losing their ability to construct grammatically correct and complete sentences? Are they losing their ability to communicate to people outside their peer group? There are several studies that address these questions.

One such study was completed in 2008 by the Pew Research Center, and another was completed in 2006 by Stanford University. The Pew Research Center used a telephone survey of 700 teens, ages twelve through seventeen, and focus groups of high school students to determine whether students’ use of electronic communication affected their school writing assignments. The Pew study found 64% of teens incorporate some informal styles from their electronic communications into their writing at school, 50% of teens sometimes use informal writing styles instead of proper capitalization and punctuation in their school assignments, 38% use text shortcuts in school work such as “LOL,” and 25% use emoticons. The study concluded that electronic communication was adversely affecting high school students’ ability to write formally.

The Stanford University study came to the opposite conclusion. The Stanford study analyzed the writing of 189 Stanford students to analyze the same issue. The researchers found that because of electronic communication, students were writing “A LOT,” both in the classroom and outside the classroom, with electronic communication mostly motivating their out-of-class writing. The study also found that students were aware of their audience and adjusted their writing styles accordingly. They wrote more formally for classroom writing, and increasingly saw writing as collaborative, social, and participatory rather than solitary. Admittedly, these were Stanford students, living in what the researchers called the “Stanford bubble,” but the researchers corroborated their findings with other studies they performed using a broad sampling of college students across the country.
Accordingly—at least according to the results of the Pew Research Center and the Stanford University study—on the one hand, high school students in 2008 were said to be developing bad formal writing habits because of electronic communication, whereas on the other hand, college students in 2001 were said to be developing better writing habits. Which of these findings should law professors or senior attorneys use to address perceived deficits in the writing of law students or novice attorneys? Does legal writing suffer from an increased use of electronic communication? I do not believe there is a clear answer. There are plenty of anecdotes, but despite years of researching, I have not located a formal study addressing the effect of electronic writing on legal writers, and this could be a problem. Instead of relying on empirical evidence based on valid studies in the field of legal writing, we often rely on anecdotal evidence or empirical evidence from other fields.

B. Professor Chestek’s Study

Yet another example of why it is not sufficient to rely on studies of writing in other fields is shown by one of the few extant statistically rigorous studies of legal writing, undertaken by Kenneth Chestek of the University of Wyoming College of Law. Professor Chestek has researched and written about the role and efficacy of narrative in legal writing. He has generally argued that stories tend to persuade people, and that narrative is more effective in terms of reader comprehension and persuasion than logically structured legal arguments. While his claims are based mostly on anecdotal evidence from judges, practitioners, and professionals in fields other than legal writing, he was not content to rely exclusively on that research. Instead, he has performed his own experiment to determine whether narrative is more persuasive within a brief’s “Statement of Facts” and the brief’s legal argument itself.

He published his findings in an article titled Judging by the Numbers: An Empirical Study of the Power of Story. Professor Chestek’s controlled study asked legal practitioners, law clerks, and judges to read two versions of a legal argument. One version was written in a sound, logical argumentative style (a logos brief), and the other was written in a sound, logical style, but with interwoven elements of narrative (a story brief).

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40 See generally Spencer, supra note 7, at 185–88; Chestek, supra note 4.
41 See Chestek, supra note 4.
42 See Chestek, supra note 4.
43 See Chestek, supra note 4.
44 See Chestek, supra note 4, at 6–10.
45 See Chestek, supra note 4.
Professor Chestek’s study revealed that judges, like real people, found the story brief more persuasive than the logos brief, but participants with less experience “(including law clerks) tended to rate the logos brief more highly than more experienced participants did.” In other words, inexperienced practitioners were an exception to the well-established finding that people find stories more persuasive. This finding underscores the importance of empirical analyses of legal writing. Sometimes the findings of a legal writing study may mirror findings in other fields, but, sometimes, as was the case with Professor Chestek’s study, the particular nuances of legal practice may alter the applicability of a non-legal writing study. Professor Chestek’s study is a perfect example of how a well-researched conclusion from other areas of writing may not necessarily be valid in the legal world.

C. Professor Long’s Legal Writing Studies

Additional examples, showing why we need empirical studies based in legal writing, are derived from the results of two of my own empirical studies. My results suggest that we need empirical studies to test unchallenged assumptions that legal writing professors have been making for decades.

Years ago, I read a passage in a legal writing textbook that said intensifiers, words like very, clearly, and obviously, should be avoided, as they are overused and judges tend to see them as a sign of weakness in an argument. Additional research revealed that virtually all legal textbooks contain similar advice. Yet, I found the advice odd, as intensifiers often help to clarify meaning—everyone knows that very hot is hotter than hot. After researching the issue, I realized intensifiers had been studied for decades and most studies showed that intensifiers do, in fact, intensify. For example, a 1959 study showed “the intensifier ‘very’ was shown to have a scalar value of approximately 1.25.”

46 See Chestek, supra note 4, at 29.

47 I interpret Professor Chestek’s findings to suggest that law clerks and inexperienced practitioners have had the humanity beat out of them in law school and are inordinately impressed by purely legalistic arguments. Judges, on the other hand, who generally have more wisdom and life experience, are more attuned to the humanity of a given case and appreciate the added perspective of a narrative.

48 I read this passage in Richard K. Neumann, JR., Legal Reasoning & Legal Writing: Structure, Strategy, and Style 330 (5th ed. 2005) (“‘It is obvious’ and ‘clearly’ supply no extra meaning. Instead, they divert the reader’s attention from the message of the sentence.”). Later, I asked Professor Neumann where he obtained his information for this claim, and, half-jokingly, he told me that he had no source for that information and probably just pulled it out of the air.

49 See Intensifiers, supra note 2, at 174–75.

50 Norman Cliff, Adverbs as Multipliers, 66 PSYCHOL. REV. 27, 30 (1959).
1.16, then “‘very good’ carries a favorability factor of approximately 1.45 (1.16 x 1.25).”51 Other studies have corroborated this finding.52

Although I could not find similar statistical-based studies in the legal field, I did find several surveys and scores of legal practice articles and books assuring readers that intensifiers are needless clutter and detract from the message in legal writing.53 But nobody had ever done a scientific study to see if they really did detract from legal writing in a meaningful way. So, with William Christensen, I conducted a study to determine whether using intensifiers had any significant effect on winning on appeal.54 We examined hundreds of appellate briefs and compared the number of intensifiers used in the briefs with the results of their respective appeals.55 We found that, in certain situations, using a high number of intensifiers actually was correlated with a decreased chance of winning an appeal.56 In other words, contrary to the findings in other fields, in certain legal writing contexts, intensifiers do not intensify.

We did not, however, believe that an increased use of intensifiers in appellate briefs actually caused the appeals to lose more often, but the correlation did lead us to hypothesize that using a high rate of intensifiers was associated with a belief or knowledge that an argument made in a brief was a losing argument. We further hypothesized that using more intensifiers was a subconscious attempt to bolster a weak argument. We called the causal effect the “argumentative threat” and conducted a second study to test our hypotheses.57

In our second study, we examined hundreds of United States Supreme Court opinions and compared the use of intensifiers in majority opinions (where the authors knew they were winning) with intensifiers in dissenting opinions (where the authors knew they were losing).58 The study confirmed our previous hypothesis that Justices used more intensifiers in dissenting opinions, or, in other words, when they knew they were losing.59

51 Cliff, supra note 50.
52 See, e.g., Edward E. Smith et al., Combining Prototypes: A Selective Modification Model, 12 COGNITIVE SCI. 485 (1988) (finding similar results to the Cliff study using the words “very” and “slightly”).
53 See Intensifiers, supra note 2, at 174–75.
54 See Intensifiers, supra note 2, at 183–84.
55 See Intensifiers, supra note 2, at 183–84.
56 See Intensifiers, supra note 2, at 181–86.
57 See When Justices (Subconsciously) Attack, supra note 2.
58 See When Justices (Subconsciously) Attack, supra note 2. This study was validated by a much larger study, see supra notes 25–28 and accompanying text.
59 See When Justices (Subconsciously) Attack, supra note 2, at 947–55; see also Carlson et al., supra note 26.
The important thing about the first intensifier study is that, for the first time (at least that I am aware of) somebody had done a scientific, statistical analysis of legal writing to challenge a belief that was previously only supported by anecdotal evidence. As I presented our findings at various conferences, I urged others to engage in similar statistical or scientific-based analysis of more important issues in legal writing. If we want legal writing as a discipline to be taken seriously, we must be able to show, through rigorous studies, that we engage in serious legal writing scholarship.

D. Professors Owens’s and Wedeking’s Study

Empirical studies of legal writing are also needed to address the differing opinions scholars have about legal writing. As William Christensen and I were close to publishing When Justices (Subconsciously) Attack: The Theory of Argumentative Threat and the Supreme Court,60 I came across a study by Ryan J. Owens and Justin P. Wedeking, entitled Justices and Legal Clarity: Analyzing the Complexity of Supreme Court Opinions, that seemed to contradict our findings about the Justices’ use of intensifiers.61 The study also indicated that dissenting opinions are written more clearly than majority opinions and that the Justices we claimed wrote less clearly (Justice Scalia for example) wrote the most clear opinions, and those we claimed wrote more clearly (Justice Ginsberg for example) wrote the least clearly.62

After reading Professors Owens’s and Wedeking’s article, I was initially perplexed and a little worried, until I read how they measured clarity. Professors Owens and Wedeking assumed that “words like always, absolutely, and clearly . . . measure[d] how confident one [was] about something.”63 They also assumed that higher levels of certainty corresponded with expressing or portraying issues less complex.64 Of course, our research showed Professors Owens’s and Wedeking’s assumption to be inaccurate; words like absolutely and clearly when used in legal writing actually reveal a lack of confidence in one’s argument and are associated with less clear writing.65

Therefore, we need to do research not only directed specifically towards legal writing, but conducted by legal writing professionals. Professors Owens and

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60 See When Justices (Subconsciously) Attack, supra note 2.
62 See Owens & Wedeking, supra note 61, at 1033–34.
63 See Owens & Wedeking, supra note 61, at 1056.
64 See Owens & Wedeking, supra note 61, at 1056.
65 See Intensifiers, supra note 2; Carlson et al., supra note 26.
Wedeking are both political science professors and cannot be faulted for making their assumptions. This example shows why more empirical research studies are needed: Had we not done our study, the conclusions of Professors Owens and Wedeking would likely remain unchallenged. As a result, our study casts doubt on Professors Owens’s and Wedeking’s assumptions and by engaging in empirical analysis, we were able to join in a vibrant exchange of ideas with scholars in other disciplines.

Finally, there are many legal writing scholars who have proposed important theories about legal writing and legal advocacy that are begging to be tested. Professor Michael Smith offered an important and innovative theory at the 2015 Psychology of Persuasion Conference at the University of Wyoming College of Law. Professor Smith’s theory concerned how precautionary policy arguments reflecting uncertain outcomes are generally avoided by people outside the legal realm. Would this outcome hold true for judges, who often make decisions based on policy arguments? A well-designed study might shed some light on that question.

V. Conclusion

Legal writing and social science professionals need to corroborate to produce more quality legal writing-based empirical scholarship to better serve our law students and the legal profession generally. As discussed above, reliance on non-legal writing studies may lead to inaccurate conclusions due to the differences between legal writing and other types of writing and the differences between legal writers and other types of writers. Although there is a definite trend toward scholarship in this area, many studies are under increased scrutiny. However, well-designed studies will help us better understand how legal writing compares to other types of writing. If we want to move forward with the science behind the art of legal writing, we need to create a new library of empirical studies to back-up our areas of expertise.

66 See Owens & Wedeking, supra note 61, at 1027.

67 See Videotape: Michael Smith, The Devil You Know: The Power of Cognitive Uncertainty in Policy-Based Persuasion, Psychology of Persuasion Conference, held by the Center for the Study of Written Advocacy, and the University of Wyoming College of Law (Sept. 18–19, 2015) (on file with the University of Wyoming, Wyocast On-Demand), https://wyocast.uwyo.edu/WyoCast/Play/f4020081cc18413d9b94e1a07c128351d?catalog=b3ef27d-f1a3-4752-b149-e95d7c7dd956.

68 See supra notes 29–67 and accompanying text.