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An Old-Fashioned Bluebook Burning



Paul Gowder¹

I. INTRODUCTION: THE BLUEBOOK'S PATHOLOGIES ARE THOSE OF THE LAW ITSELF

As the faculty advisor for the newly-minted Journal des Refusés, the duty has fallen to me to identify the most eminently refusal-worthy aspect of the enterprise of legal publishing.² I speak, of course, of the Bluebook: bane of generations of authors and journal editors, the source of painfully detailed rules about every aspect of legal citation, complete with signals,³ thousands of abbreviations, cross-references that send readers merrily scurrying across hundreds of pages of law review articles to find a source, and typography rules seen in no other citation style.⁴ It's long past time to put it out of its misery.

¹ Thanks to Sarah Lawsky and David Ziff, as well as the editors of the Journal des Refusés, for offering suggestions (with no endorsement whatsoever implied!) to improve this essay. As a way of putting the author's money where his mouth is, this essay does not follow Bluebook format. It does, however, follow a minor variation of Bluebook format, which maintains the core structure of a footnote, such as the idiosyncratic volume-journal-page organization for citations to journal articles. But it gets rid of many of the things denoted as nonsense within these pages, such as signals, abbreviations, excessive typography, and *supra* cross-references, and replaces them with sensible things used in other disciplines like a reference list. Thus, for example, *see* Richard A. Posner, *The Bluebook Blues*, 120 Y. L. J. 850, 851 (2011) becomes Richard A. Posner, "The Bluebook Blues," 120 Yale Law Journal 850, 851 (2011)—a format that communicates precisely the same information, but with markedly less noise. Subsequent references go from *but cf. also e.g. generally* Posner, *supra* n. 1 at 852 to Posner (2011, 852), and then the reader will get to look at the references list at the end of the essay to figure out what Posner (2011) is meant to signify. When I refer to the current (21st) edition of the Bluebook, I shall simply say "Bluebook," followed by a page number. One-off references to websites for some lone chunk of information are left off the reference list for simplicity.

² And doubtless also the motivation for numerous refusals of otherwise perfectly good scholarship by journal editors who (quite understandably) don't want to italicize commas until their eyeballs bleed.

³ For decades requiring its users to puzzle out the gnomic difference between *see*, *see e.g.*, and *see generally*.

⁴ Seemingly devised for the sole purpose of inflicting eye strain and carpal tunnel syndrome on its hapless victims.

This essay (I refuse to give it the self-important capitalized Essay of traditional law review style) argues for radical reform to the Bluebook—sufficiently radical that we might even go so far as to call it "abolition," as I argue that the very features that make the Bluebook distinctive when compared to citation systems in other fields are also those that inflict vast amounts of unnecessary if not downright harmful labor on its users.

The sorry state of affairs in legal citation isn't the fault of the student editors at the law reviews that publish the Bluebook, although they have the power to fix it. If blame is to be allocated, it ought to be allocated primarily to a fundamental pathology in the system of legal writing—namely the incompatibility between the epistemologies and prose styles associated with legal scholarship and legal practice. Secondarily, some blame can be allocated to the traditionalism and resistance to change of the legal profession, especially as it pertains to the adoption of technological improvements.

This essay will focus on the four most dysfunctional elements of the Bluebook system: the meaningless signals, the bizarre typographical rules, the complex and unnecessary system of cross-references, and the ever-multiplying and openly manipulative abbreviations. Each of those generates immense amounts of work for legions of law students, legal scholars, and, to some lesser degree, the practicing bench and bar. And each of those rules reflects the pathologies noted above. At best, those rules make sense in the context of a world where most legal writing, including scholarly writing, is primarily doctrinal and is mostly read in printed bound journals—a world that no longer exists.

To some extent, the problems this essay identifies in the Bluebook are mitigated—but not eliminated—in the course of legal practice. First of all, the Bluebook offers somewhat simpler rules for practitioners than for academics. Second, the most rigorous enforcement of Bluebook rules is in the academic context, where legions of law review editors are frequently selected for their skill and enthusiasm in Bluebooking and then promptly set to that task.⁵ Lawyers and judges are more capable of protecting themselves

⁵ Just to very casually confirm that a Bluebook requirement is still common in law journal selection processes, I googled "law review competition bluebook" and identified a number of journals across the rankings that still incorporate the Bluebook into their membership competitions in one form or another (typically either a quiz, an exercise, or as part of the scoring for note writing). Those include the main journals at Harvard (which uses "a small subset" of the rules in its "subcite" competition, per its Writing Competition Samples and Tips (2019) https://perma.cc/6DYQ-2Y9B, p. 4); Georgetown ("[a] large portion of your score in the Write On Competition will be your adherence to the citation conventions in The Bluebook," "Righting" the Write-On Competition (2018), https://perma.cc/6FB9-EYEH, p. 4); Emory (which describes "the complex web of citation rules" as "the bread-and-butter of

from such wasteful uses of their time, and hence are likely to just ignore the most pointless rules.

In particular, the abbreviations and signals make a certain amount of sense in the context of legal practice. However, I shall argue that their utility breaks down under examination.

To summarize this part of the argument to come, the signals (see, see e.g., and all the rest) are theoretically useful to permit lawyers to precisely specify the degree of authority which they are claiming backs up a legal proposition. However, they fail spectacularly at the intersection of legal scholarship and legal practice as most legal scholarship is interdisciplinary and concerned with the epistemology of credence rather than authority. By this, I mean that legal scholarship is about our degree of confidence in beliefs rather than the pedigree of some authoritative utterance of a proposition; signals identifying the degree of match between an utterance and a proposition only indirectly bear on whether one should believe that proposition. Moreover, the actual signals we have are notoriously difficult to consistently operate. Finally, if I'm right that signals are only useful in the context of actual legal practice as a way of communicating about authority, then they're really rules of legal interpretation, not rules of legal citation; consequently, they should be made by judges and not by law students.

Abbreviations, by contrast, are clearly useful but only in discreditable ways: the Bluebook all but explicitly confesses that its purpose is to evade the length limits that courts put on their briefs. The abbreviations may have some residual utility in reducing the length of academic articles, and thus saving some paper in the increasingly fewer number of print copies of law review articles that are produced. However, abbreviations for that purpose are really just a band-aid over a deeper problem with academic legal writing: namely the absurd proliferation of citations and hence massive length of law review articles. That proliferation is itself a consequence of the core pathology noted above, in which the epistemology of authority—which demands that every assertion, no matter how trivial, be supported by some bearded eminence of the past—is inappropriately imported into a scholarly context in which (heaven forbid) sometimes authors are to be trusted to offer their own interpretation of the external world and exercise their own

journal work," Write-On Competition Requirements, https://perma.cc/6PBQ-HVGA); Iowa ("Membership," https://perma.cc/478B-KQ5N); Arizona State (Write-On Competition, https://perma.cc/4F5A-3QJ4); Florida ("Prospective Members," https://perma.cc/7PDX-8DJD); Penn State ("Writing Competition," https://perma.cc/9PTR-69LD); Alabama ("Membership," https://perma.cc/6SS4-LWND); Texas Tech ("Membership Information," https://perma.cc/WW6X-7R44); Richmond ("Competition," https://perma.cc/8CUE-722V); San Diego ("Annual Write-On Competition," https://perma.cc/6LDS-VX5G); and Vermont ("Prospective Members," https://perma.cc/NLU9-4UCQ) along with numerous others.

3

professional judgment as to which claims are to be supported by a citation in order to be credible to the reader. To be clear, I don't blame student editors for this. Law review editors are mostly planning to go off and practice law, and hence ought to be acculturated into the epistemology of authority. The ultimate fault lies in law faculty, who rarely edit their own scholarly journals.

On the other hand, the typographical rules and the cross-references are simply useless. As far as I can discern, they're nothing but a holdover from the days when professional print shops produced legal filings to be consumed in print and professors wrote their articles with the aid of a typewriter and possibly a typist. Maybe those rules worked in the old days of print, although I suspect that even then the rules of every other citation style would have worked better. But they manifestly do not work in a context in which legal writers are expected to produce both court filings and academic articles using (God help us) Microsoft Word and typically read them in PDF.

Those four flaws—which not coincidentally are the four features that are probably the most distinctive ways in which the Bluebook differs from other commonly used academic citation styles in the humanities and social sciences (such as Chicago, APA, and MLA)—thus exemplify the deeper flaws of the enterprise of legal writing. I describe them at length below with the aim of inspiring the reader and the Bluebook's authors to reform them.

Toward the end of this essay, I'll answer the most prominent academic defense of the Bluebook and suggest a technology-heavy way forward to redesign a better system or at least put out the most egregious fires of the current one.

Before we get there, however, we should understand the scope of the problem and the forces likely to be arrayed against it, through an examination of the massive bloat in the Bluebook over time and the economic interests benefitting from it.

II. THE SCALE OF THE PROBLEM (AND OF THE BLUEBOOK, AND OF ITS ECONOMY)

The Bluebook—currently in its 21st edition, which was put out in 2020, although its 21st printing (of the 21st edition, which was also published in 2021) has some substantive changes⁶—costs \$46.00 direct from the publishers, plus a whopping \$15.44 shipping UPS ground to Chicago (notwithstanding the existence of USPS Media Mail).⁷ The current edition has a print length of 365 pages, strikingly the same number of pages as the sixteenth edition, published in 1996, which has followed me around since

⁶ https://perma.cc/7238-R92H.

⁷ I bought an updated edition from Amazon, because, come on.

my own 1L year. But not so fast: before you praise the authors of the Bluebook⁸ for managing to go a quarter century without inflating its size, you should be aware that the current edition has removed many pages of foreign abbreviations—not because the rules for foreign abbreviations are *gone*, mind you, but merely because they are now online-only.⁹

Alas, the reader who wishes to know that KOAP RF is the abbreviation for the Kodeks Rossiĭskoĭ Federatsii RF ob Administrativnykh Pravonarusheniiakh (Code of Administrative Violations)¹¹¹ can no longer find it in the print edition. As the foreign abbreviations take up fifty-one pages of my 1996 edition, this suggests that at a minimum the bluebook has grown an additional fifty pages of content since then; also, the now-online-only section itself has grown some indeterminate amount with more jurisdictions represented.¹¹

The Bluebook has also spawned its own secondary literature. One can purchase at least the following:

 A textbook called "Understanding and Mastering The Bluebook A Guide for Students and Practitioners," itself 33 dollars, 200 pages and in its fourth edition from Carolina Academic Press.¹²

⁸ Interestingly, those responsible for the Bluebook tend to describe themselves as "compilers" rather than "authors" (e.g., Bluebook viii) —a choice that is, at best, problematic in the context of their claim to copyright in things like the abbreviations. On the copyright claims, Carl Malamud, "The Blue Wars: A Report from the Front," Harvard Law Record, March 21, 2016, https://perma.cc/5H6L-G6C9 has the story. On the problems this ought to cause for copyright claims, see Feist Publications, Inc., v. Rural Telephone Service Co., 499 U.S. 340 (1991). It seems troublesome, to say the least, in an estoppel-ey kind of way, to permit the Bluebook editors to present themselves as mere compilers of external legal usages in one breath and to claim copyright in a creative work in another.

⁹ By contrast, the seventeenth edition of the Chicago Manual of Style (2017), while 1146 pages long, covers a vast array of material apart from citations, such as publishing norms, intellectual property rights, grammar, and prose style. The bit about citations only occupies 168 pages (which in all honesty still seems to me to be too much.) If one wants the additional material which the Chicago Manual offers for every other discipline in addition to the citations, our hapless lawyer will probably find themselves also purchasing the "Redbook," which just covers non-citation style, from West for another 73 dollars and 737 pages in the print edition. Bryan A. Garner, The Redbook: A Manual on Legal Style (2018). Price: https://perma.cc/2PXR-T5DW.

¹⁰ https://perma.cc/3MGH-NXRJ.

¹¹ Just comparing the two editions I own, at some point between 1996 and 2021 the Bluebook's authors added Belgium, Chile, Egypt, Greece, Hong Kong, Iran, Iraq, Kenya, Lebanon, Nicaragua, Nigeria, Pakistan, Philippines, Portugal, South Korea, Taiwan, and Zambia. By my count, this is a more than 50% increase, so we can safely assume that were the foreign jurisdiction abbreviations printed, they'd inflate the book by another 75 pages or so. And they still call it a "table." But even this is an underestimate, as will be described below.

¹² Linda J. Barris, Understanding and Mastering the Bluebook: A Guide for Students and Practitioners (2020). The blurb for that book observes that "The Bluebook® provides the rules for legal citation, but can be intimidating and frustrating to use." https://perma.cc/792U-L3EL. So true, bestie.

- That book pairs with a set of online exercises which can be purchased for an additional 29 dollars.¹³
- The student who needs more exercises can also purchase an "Interactive Citation Workbook for The Bluebook: A Uniform System of Citation" from LexisNexis for 76 dollars.¹⁴
- Not to be left out, Aspen will sell you "Cite-Checker: Your Guide to Using the Bluebook," in its fifth edition, and only 224 pages, for which our intrepid law student will add \$106.95 to their student loan debt.¹⁵
- If our imagined 1L trying to master this thing is still not satisfied, Hein sells "Prince's Dictionary of Legal Citations: A Reference Guide for Attorneys, Legal Secretaries, Paralegals, and Law Students (currently in its tenth edition, 580 pages—which is somehow longer than the Bluebook itself—and \$79.95). 16
- Hein also sells an abbreviated version, a "User's Guide to the Bluebook," 48 pages and \$18.95.17
- West sells "Legal Citation in a Nutshell" (in its third edition, 489 pages—again longer than the actual Bluebook—and \$58.00). 18

If nothing else, the Bluebook is a nice profit-generator for the authors and publishers of all the secondary materials trying to teach poor law students how to make sense of it (though one does wish they'd spend their time and money learning some more law instead). But the real profit goes to the Harvard Law Review—last year, an independent journalist by the name of Dan Stone got hold of some financial statements, and concluded, plausibly, that the Bluebook produces about a million and a half dollars of profit a year, which goes disproportionately to Harvard.¹⁹

¹³ Linda J. Barris, Mastering the Bluebook: Interactive Exercises (2020). Price: https://perma.cc/2JM3-5B6G

¹⁴ Tracy L. M. Norton, Interactive Citation Workbook for The Bluebook: A Uniform System of Citation (2023). Price: https://perma.cc/V3R5-E3LP. According to Goodreads, the prior edition had 180 pages (https://perma.cc/WK9V-DNB2), although I cannot find a page listing for the current edition.

 $^{^{15}\,}$ Deborah E. Bouchoux, Cite-checker: Your Guide to Using the Bluebook (2021). Price and pagination: https://perma.cc/8P32-XGTS.

¹⁶ Julie Roberts Fungerson, Prince's Dictionary of Legal Citations: A Reference Guide for Attorneys, Legal Secretaries, Paralegals, and Law Students (2021). Price and pagination: https://perma.cc/SYD2-YD46.

¹⁷ Alan L. Dworsky, User's Guide to the Bluebook (2020). Price and pagination: https://perma.cc/TZN5-ZZAC.

¹⁸ Larry L. Teply, Legal Citation in a Nutshell (2021). Price: https://perma.cc/DMD6-WCJF. Pagination: https://perma.cc/AWP7-HKBN.

¹⁹ Dan Stone, "Harvard-led Citation Cartel Rakes in Millions from Bluebook Manual Monopoly, Masks Profits," https://perma.cc/S27U-JLGQ (June 9, 2022).

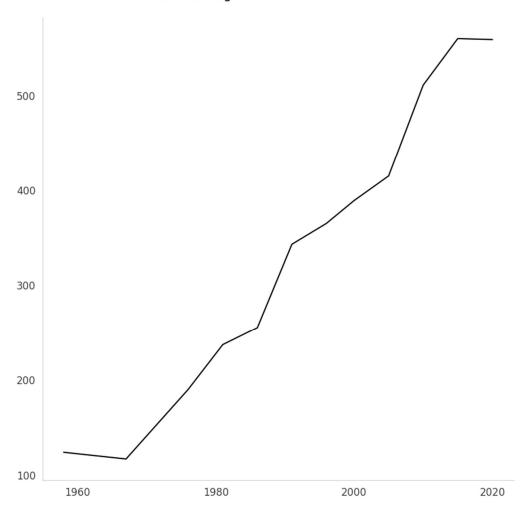
If all of these publishers are to claim so much money from the legal profession, they ought to provide a useful service. But they don't.²⁰ While the cottage industry of hating on the Bluebook has flourished at least since Judge Posner took a bite out of it in 1986,²¹ I will suggest, from the standpoint of 2024, that the Bluebook isn't just *bad*, perhaps more importantly, it's *obsolete*. At best, it's semi-optimized for a world of paper publishing, paper court filing, and doctrinal legal scholarship oriented toward authority rather than today's world of interdisciplinary legal scholarship, electronic filing, and scholarship as well as cases and statutes downloaded from the internet and often read on a computer screen.

Before we get there however, we should note the most unmistakable fact about the Bluebook: it's *huge*, and ever-growing. The Northwestern law library has copies of the Bluebook going back to its 10th edition, in 1958—which contained a mere 124 pages. The 20th edition was 560 pages, and the only reason the present 21st edition is any shorter is because the international abbreviations were moved to online only. If we conservatively impute the length of the online-only material in the present edition to be the same as it occupied in the previous (194 pages), then the present edition comes up to 559 pages. Unsurprisingly, there has been a steady increase over time in the number of pages occupied by the Bluebook, as illustrated by Figure 1.

²⁰ I freely acknowledge that there are some things that the Bluebook does better than its competing citation styles, such as the APA, MLA, and Chicago formats. The most significant example is that, unlike Chicago style, the Bluebook does not require one to include the city of publication in book references—easily the most pointless and obsolete rule out there, not least because of its hopeless ambiguity. Does one list the city of the publisher's headquarters? What if there isn't one—what if the publisher is fully virtual? Does one list the city listed on the title page of the book? What if there isn't one? What if multiple cities are listed? I'm pleased to note that Posner (2011, 854) agrees with my take on the city of publication nonsense.

²¹ Richard Posner, "Goodbye to the Bluebook," 53 University of Chicago Law Review 1343 (1986).

Number of Pages in the Bluebook Over Time



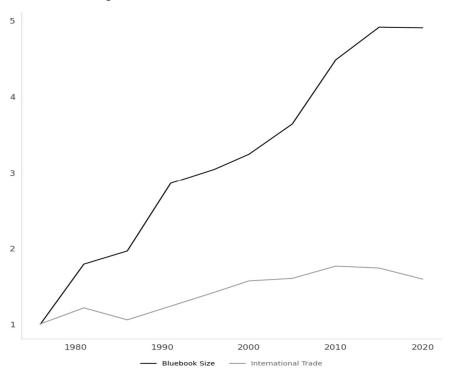
A. The Bluebook's Inflation over the Years

In addition, the dimensions of Bluebook pages have increased significantly over time. Simply estimating the overall print area of the Bluebook by multiplying the number of enumerated pages by the measured printed area suggests something on the order of a 7-fold increase in the size

of the Bluebook since 1958.²² It would seem that the Bluebook inflates at a rate comparable to the U.S. dollar.

One can imagine a number of facts about the external world that might account for this increase in size. It may be that the Bluebook grows because of an increase in the number of sources to which a lawyer would be expected to refer. For the most obvious example, to the extent the U.S. has a more complex and international economy, American lawyers are likely to need to worry more about foreign law.

However, it would appear that the Bluebook grows faster than America's foreign trade, at least expressed as a percentage of GDP. The World Bank provides historical data back to 1970 for this.²³ Over the time period in question, the Bluebook has multiplied many times, while trade occupies less than twice its original share of GDP.



Fold Change in Bluebook Size and International Trade Over Time

²² There's a certain amount of inaccuracy in this measure, as I measured the printed area of pages by hand with a tape measure; typefaces may also change. Also, some of the pages appear to be laid out very differently even within the same volume. I'm rounding to reduce small measurement errors. The ideal would be a word count, but there are so many different layouts depending on, e.g., the extent of a given page taken up by tables and such, that it would require lots of sampling to produce anything like an average words per page for a given volume.

²³ World Bank Data, trade as percentage of GDP, https://perma.cc/3G78-JQEZ.

B. Does the Bluebook Grow with U.S. International Trade (as a Percentage of GDP)?

Of course, this comparison is highly imperfect, as one ought not to compare a change in percentage to a change in absolute size (though it's hard to come up with a different way to get at the relative importance of international trade). However, given that the bulk of foreign material was removed from the current print edition, and that edition is still fully as long as the entirety of the 1996 edition with which I began my own legal career, it is obvious that not *all* of the Bluebook's growth can be attributed to a growth in international materials.

The only other organic reason that immediately suggests itself for the Bluebook's huge expansion in size would be the advent of the internet, requiring novel citation rules to deal with an entirely new medium. Yet the current edition of the Bluebook devotes very little space to the internet—apart from a handful of 1–2-page entries for "Electronic Databases and Online Sources" interspersed within the rules for other sources, the closest thing to an internet-specific section comes in rule 18, covering "The Internet, Electronic Media, and Other Nonprint Resources," which occupies a mere 22 pages of the Bluebook. Moreover, many of those pages are devoted to media that preceded the internet, such as microform, CD-ROM, and film. The internet-specific section doesn't quite cover seven pages. So, the internet clearly cannot be blamed for the Bluebook's bloat.

While I begin this essay with a discussion of the Bluebook's size, it is my contention that its size is a symptom of its underlying problems, not the problem itself. While the accretion of rules is risky—the more rules there are in any system, the harder they are to learn and comply with, and the more costs the system of rules imposes on the activity regulated—the cost-benefit tradeoff with more rules isn't necessarily on the side of reduction. It's only to be expected that legal scholarship and practice—a discipline with a unique relationship to its more important source material, that of *binding authority*, as well as a dispositional obsession with rules—would have more citation rules than other disciplines.

Where accretion of rules becomes a symptom of a problem, however, is when that accretion is thoughtless—when new rules are added to encompass new situations without the old rules being reviewed to discern if

they continue to be (or were ever) functional. Thus, in a number of high-salience areas, the Bluebook diverges radically from other citation systems without any real reason, generating immense amounts of wasteful and needless busywork from which other disciplines do not suffer. This has been a problem at least since I was a law student a quarter-century ago.

III. SIGNALS ARE MEANINGLESS IN INTERDISCIPLINARY CONTEXTS AND HARMFUL ELSEWHERE

No other discipline uses signals—formal prefatory descriptions attached to a citation to indicate the relationship of the citation to the underlying claim. There's a reason for this, but it requires a small amount of excavation.

The epistemology of legal citation is, of course, fundamentally about *authority*: even if one rejects a kind of brute Austinian positivism about sovereigns and commands, the ordinary function of legal text is still to speak in the subjunctive voice, to say "this is how it oughta be," and hence to guide practical action; moreover, under most circumstances, it oughta be the way the text says *because* the text says it. Finally, to the extent some text doesn't say something with absolute clarity, it leaves room to argue for the opposite proposition from some other authoritative text.

Under such circumstances, it makes sense to have a system of signals that provide fine-grained gradations of authority, understood as how explicitly and directly some authoritative text uttered the proposition under discussion—it really matters whether the statute says "death to all thieves" or merely implies it, because if the latter is the case, it may be relevant that some other authority convincingly implies that thieves might get away with something short of death. If you're the lawyer for a convicted thief, you'd better be on top of that difference.

In their ideal form, this is what the Bluebook's signals communicate: if the statute outright says "death to all thieves," then one can cite it for the proposition that thieves are to be put to death with no signal at all. If the statute merely says "death to all unjustified perpetrators of serious crimes against property," one probably ought to put a *see* in front of it to signal that, as the Bluebook says, "[c]ited authority clearly supports the proposition," but doesn't outright declare it, that is, "the proposition is not directly stated by the cited authority but obviously follows from it; there is an inferential step between the authority cited and the proposition it supports."²⁴

But there's a sizable gap between signal theory and signal practice. Anyone who has ever litigated knows that lawyers misrepresent,

²⁴ Bluebook 62.

intentionally or accidentally, the degree of support their argument receives from the underlying authority all the time. In actual practice, it would be *mal*practice to rely on the signals given in a brief for any proposition important to the case, rather than going and looking for oneself. (And if the issue is unimportant, then the degree of support is unlikely to matter.) So, at most, such signals are only useful in the scholarly context.

And this brings me to the crux of the problem with the Bluebook's signals. As anyone who has read legal scholarship in the last few decades knows, purely doctrinal legal scholarship, in which the author is identifying the command entailed by the conjunction of a bunch of legal text—that is, *authority*—is rare to the point of vanishing. The bulk of legal scholarship focuses on critique and reform of policies which may or may not be memorialized into legal doctrine. Moreover, much of that scholarship is interdisciplinary, carrying out exercises such as empirical study of the effects of some legal regime, philosophical analysis of its coherence and normative value, or historical excavation of its origins. The relationship of sources to claims in such scholarship is different: it's about credence not authority; the reader needs to know how much they should shift their degree of belief in the proposition in the text in virtue of the information given in the citation. And that just isn't what signals do.

Consider a couple toy examples. If I'm citing a prior article which explicitly utters the sentence "restrictions on high-capacity magazines increase crime" to support the proposition in question I would be entitled by the rules of the Bluebook to render that citation with no signal at all, suggesting the highest degree of authority is owed to it. This is true even if the cited study gives extremely weak support for the proposition in question—if, for example, its analytic strategy is just to take a single year's crime rates and a binary variable indicating whether a state has restrictions on high-capacity magazines in its law and then do a t-test. That methodology would be laughed straight into the rejection pile in any peer-reviewed social science journal because there's no way to make remotely plausible claims about causation from it. To understand why, consider this: what if states enact restrictions on high-capacity magazines in response to crime? Nonetheless, because the underlying source says the thing our legal writer gets to confer on it the most authoritative signal, no signal at all.

By contrast, suppose I cite an article that provides logically undeniable support for some proposition, but only with the addition of a universally acceptable inferential step. For example, suppose I cite a mathematics textbook claiming with a proof that every positive integer has two square roots—a positive and a negative. If I want to cite that article for the proposition that the square root of 4 could be -2, I'll have to attach a *see* to

it even though the reader would be entitled, by the content of the cited reference, to believe what I was saying beyond any doubt.

Those examples, although a bit absurd, should suffice to illustrate the point: the sorts of properties of a source that matter for degrees of legal authority are not the same sorts of things that matter for epistemic credence; rules appropriate for one are not appropriate for the other. In the case of the two examples given, the issue is inferential distance from the actual words of a source. For lawyers, because legal authority is made up out of speech acts, the words of a source are what matters, and the greater the inferential distance from a source the shakier the authority. For scholars, the mere fact that the proposition cited requires more inferential steps from the exact words of a source doesn't, on its own, tell us anything about the degree of credence we should give it. Similar points could be made about the other rules the Bluebook gives us to distinguish between signals. For example, cf. is to be used when "[c]ited authority supports a proposition different from the main point but sufficiently analogous to lend support."25 A responsible scholar, arguing from analogy, will explain why the analogy changes the credence one ought to give to the proposition thus defended; having a special word in italics to flag that an analogy is in play in addition adds nothing.

Yet law review editors, trained by the Bluebook to demand citations with signals, nonetheless attempt to assimilate the inappropriate signals regime to the modern landscape of legal scholarship. For the author, this is maddening: one is forced to aggressively wordsmith one's footnotes to provide information that is meaningless to the reader and then have one's wordsmithing corrected by journal editors, more meaninglessly still.²⁶

It might be objected that inferential distance still matters for non-authoritative sources—it's useful even with things like empirical articles to have the ability to communicate to the reader that a source relied on doesn't quite say the thing one is citing it for.²⁷ But I'm not sure that's true: scholars in other disciplines seem to get along just fine without any such device. In a

²⁵ Bluebook 63.

Moreover, it's my suspicion (though I cannot prove it) that the orientation toward embedding relationships of authority in one's citations even when that's not the kind of intellectual exercise a piece of scholarship is doing contributes to the unfortunate habit journal editors have of demanding that every sentence has a footnote attached to it, even to commonly known claims. In this suggestion, I agree with Fred R. Shapiro & Julie Graves Krishnaswami, "The Secret History of the Bluebook," 100 Minnesota Law Review 1563, 1567 (2016). It has also been suggested that signals have in turn promoted the excessive growth of footnotes with the requirement that many of them be accompanied by parenthetical explanations as well as the encouragement they provide for string cites. Joan Ames Magat, "Bottomheavy: Legal Footnotes," 60 Journal of Legal Education 65, 87-93 (2010).

²⁷ Thanks to David Ziff for raising a version of this point to me—although I'm also adding a couple of inferences to what he said, so I confess that I'm vigorously fighting the urge to write see thanks or something weird like that.

way, it represents an oddly distrustful relationship between readers of law review articles and their authors—as if authors in law reviews are somehow particularly bent on misrepresenting or overusing their underlying sources—but, of course, such dishonest or incompetent authors could just as easily misrepresent the signals too.²⁸

I also doubt that even the most skilled users of signals can use them correctly even when applied to core legal authority. Consider a single example. As I write this essay, the current issue of the Harvard Law Review, chief perpetrator of the Bluebook, contains exactly one full-fledged article.²⁹ The article in question is a critique of an asymmetry in the law regulating the medical profession, in which those who deny care to patients for reasons of conscience are protected from legal consequences, while those who provide care to consenting patients for reasons of conscience (such as by disobeying abortion bans) are punished. It's not a "doctrinal" article in the narrow traditional sense, by which I mean that its core insights aren't manipulations of legal doctrine, although it does extensively draw on doctrine.

Yet when Professor Fox's article does use signals to refer to legal authority it doesn't seem to quite work. The very first use of *see* in that article is attached to the following sentence:

The Texas Heartbeat Act, also known as S.B. 8, authorizes private citizens to sue anyone who "aids or abets" an abortion after "cardiac activity" can be detected (usually at about six weeks), before many women know they're pregnant.³⁰

Footnote 5, at the end of that sentence, reads, in relevant part, "See § 171.208(a)(2) (West 2021)."³¹ (There's also a footnote 4 right after "Act" which cites to the statute without a "see.")

It's a bit of a mystery why footnote 5 requires a *see*. The cited section directly gives the aiding and abetting claim for which it is cited. I guess the *see* could be meant to signify that other of the claims in the sentence in question appear in other sections of the same statute (for example, the fact that the relevant trigger is "cardiac activity" appears across section 171.201(1) (defining "fetal heartbeat" as "cardiac activity") and 171.204(a)

²⁸ At best, maybe such signals serve as a kind of prompt for reflection? This is the most charitable thing I can say about them: maybe being forced to ask themselves whether some source really says what they're citing it for could psychologically prime authors to be more careful. But if that happens, I'd like to see evidence for it.

²⁹ Dov Fox, "Medical Disobedience," 136 Harvard Law Review 1030 (2023).

³⁰ Fox (2023, 1033).

³¹ Also, do we really have to identify the publisher of codified state statutes? Why? As far as I can discern from the relevant table in the Bluebook (287-288), all of the Texas annotated codes are in the same series, and they're all published by West—so what information does this add?

(indicating that abortion is prohibited when there is a "fetal heartbeat"). Is the *see* meant to indicate that the "inferential step" in question is to read the other sections of the statute? If that is the case, why not just cite all of those too? Or is it meant to indicate something about the last bit, about women knowing that they're pregnant? In which case more than a mere "inferential step" is needed; rather, one requires a reference to actual research on the detection of pregnancy. Either way, it's wholly unclear what the *see* is meant to signify, or what sort of cognitive operations the reader would be expected to conduct differently if it were removed. And this is a citation to a statute for its legislative content—the core of the context where signals might actually be useful—and in the journal that runs the Bluebook!

A few sentences down, there's another confusing *see*: the text says, "Roe fell on June 24, 2022" and the footnote says, "*See Dobbs*, 142 S. Ct. at 2242." The quoted page of the Dobbs decision says, "We hold that Roe and Casey must be overruled." Why is there a *see*? That's about as direct a statement as you can get (unless the inference in question is from "must" to "hereby is?"). Jumping forward four more pages, the text says, "Colorado is one of ten states to allow assisted suicide under limited circumstances" and the footnote says "§§ 25-48-101 to -123 (2016)" *without* a *see*.³² Are we meant to conclude that it takes meaningfully fewer inferential steps to get from Colorado's assisted suicide statute to permitting assisted suicide than it takes to get from Dobbs to overruling Roe?

To be perfectly clear, my point here is not to criticize Professor Fox or the students who carried out the citation editing on his article. Fox's was the only article I scrutinized simply because it was the only article when I went looking at the then-current issue of the journal which is the main culprit behind the Bluebook. My point is that even if authors and editors at the journal which is generally recognized as the best, or among the very best, in the country—and the journal with the primary responsibility for making the decisions about what the signals mean—can't make signals do any meaningful work when they're used on core legal authority, the problem isn't in the authors and editors but in the signals themselves. If it's that hard to tease out the meaning of *see* when it's used to refer to actual legal authority, imagine how pointless it is when used with anything else?

It's easy to suspect that academic writers and editors aren't even trying. Here's a confession: when I write law review articles I just put signals in more or less at random—it feels like this footnote has *see* vibes, that footnote has *see generally* vibes, scattered about like pixie dust—because I know that journal editors expect them, as far as I can tell basically just to give the cite-

³² Fox (2023, 1037).

checkers some enrichment. I suspect pretty much everyone else doing interdisciplinary research does the same. If journal editors expect to see a bunch of meaningless words scattered about in italics among one's footnotes in order to signal (ahem) that one is a member of the club, then one rationally ought to do so.

I suspect that this may be the most controversial section of this essay. Inexplicably, even lawyers and judges who should know better seem to get wrapped up in the signals. For example, there was a widespread controversy when the Bluebook changed the meaning of several signals in moving from the fifteenth to the sixteenth editions.³³ Apparently signals are sometimes used to actually draw (or justify) conclusions about the authority of a case. Notably, Ira Robbins gives examples where American jurists—and not just any jurists either, but the likes of Scalia, Bork, and Easterbrook—have relied on the cf. signal to dismiss appeals to authority using that signal in otherwise troublesome precedent as clearly nothing more than references to meaningless dicta, or scolded their colleagues for their use of that signal.³⁴ The fact that this could occur—and that the inconsistencies and confusions in the use of the signal which Robbins identifies could exist—illustrates precisely the problem. Why not just explain to the reader how some case or other source supports the proposition for which it is cited? Why attempt to assimilate that explanation (better known as "competent writing") to a fuzzy shorthand that obscures the actual intellectual exercise asked of the reader?

It's time to put the whole enterprise out of its misery.

IV. THE BLUEBOOK'S TYPOGRAPHY RULES ARE POINTLESS AND WASTEFUL.

Bluebook format has vastly more typography than any other citation style. In addition to featuring elements that no other format uses, like the insistence on using small capitals for book titles (how many people outside of lawyers and the occasional professional layout designer even know that small capitals exist?), the Bluebook for some reason has completely different typography rules for briefs in court and for law journal articles.

The standard three comparators for our allied disciplines (i.e., APA, MLA, Chicago) limit their fancy typography to italics for book and journal titles. Some citation styles, such as CSE (Council of Science Editors, used in many hard science disciplines) style—omit even that—it really isn't necessary, so long as book and journal titles are clearly distinct (which can

³³ The details are given in Michael Bacchus, "Strung Out: Legal Citation, The Bluebook, and the Anxiety of Authority," 151 University of Pennsylvania Law Review 245, 252 (2002).

³⁴ Ira P. Robbins, "Semiotics, Analogical Legal Reasoning, and the Cf. Citation: Getting Our Signals Uncrossed," 48 Duke Law Journal 1043, 1046-7 (1999).

be accomplished by setting off journal article titles in quotes or some other punctuation).³⁵ The fetish for small capitals has also crept into citations to statutes for completely inexplicable reasons.

The odd typographical quirks of the Bluebook are mostly so annoying because they're pointless. You can tell the difference between a journal article and a book because the former has a bunch of numbers around the journal title, and an article title in italics to boot, why do we also need to set the book title and the journal title in small caps? To the extent there are weird edge cases that actually require disambiguation with small caps, we could do a better job with embedded metadata (see the final section of this essay). More generally, typographic rules require a purpose, and that purpose is evidently lacking in many of the typographical rules. For example, we are told that the "in" denoting that a chapter is in an edited volume is to be in italics. But why? What is italicizing the "in" meant to signify? What is the imagined confusion which the reader might suffer if the "in" is not rendered in a special typeface?

The Bluebook's obsession with typography often reaches the level of the absurd. The most infamously stupid rule of them all is the italicized punctuation. For example, we are told that "[w]hen [e.g.] is attached to another signal, it should be preceded by an italicized comma and followed by a non-italicized comma."³⁷ The same goes for the period after *id.*, which is also required to be italicized.³⁸ With respect to periods, the difference is quite literally invisible without a magnifying glass. Even with respect to commas, who cares? It doesn't even matter if the comma after *see*, *e.g.* is italicized the same way in each instance in the same article. *It's a comma*.

Because nobody gets this right the first time, the key costs to all these typography rules are in the law review editing process. Students find themselves making tedious minute adjustments to typography on a character-by-character basis, which has to be the single worst use of the time of our

³⁵ Not only that, but the Bluebook itself doesn't require the small caps in the version of its rules for practitioners (Bluebook 7). Unless we're to imagine judges and lawyers roaming around law libraries in confusion, totally unable to distinguish between articles and books when cited in the briefs they're reading, we must suppose that small capitals are unnecessary altogether. Lexis and Westlaw seem to drop them too, even from articles—so clearly our largest databases don't see them as necessary. (Thanks to Sarah Lawsky for reminding me of this fact.) David Ziff also reminds me that the Indigo Book—the replacement for the Bluebook devised in the wake of disputes about the copyright status of the original by Carl Malamud and Chris Sprigman and currently authored in its second edition by Jennifer Murphy Romig—also abandons most of the detailed typography rules. Christopher Sprigman and Jennifer Romig, The Indigo Book: A Manual of Legal Citation (2021), R2, https://perma.cc/H325-HJEL.

³⁶ Bluebook 152.

³⁷ Bluebook 62.

³⁸ Bluebook 79.

most talented law students that I can imagine.³⁹ After the student's pain is over, the professor's pain begins. Lawyers, of course, fear anything with the remotest whiff of the technical like LaTeX, and so we're forced to manage all of this typography in Microsoft Word. Thus, every author of an article in the law reviews can identify with the grim experience of receiving a Microsoft Word file back from a law review with that law review's edits in "track changes," opening the file, and discovering *thousands* of edits. An appreciable portion of the time, all the tracked changes to typography (and abbreviations, and other Bluebook idiocy) causes Microsoft Word to crash when trying to review them all. I'll say more about Microsoft Word in the next section, but what I've said so far should be sufficient to illustrate the broader point: pointless rules have costs, and those costs include the tax on their users' time, which, in the case of the typography rules, is immense.

V. CROSS-REFERENCES ARE BOTH POORLY DESIGNED AND OVERCOMPLICATED

Another distinctive feature of legal citation is the forest of cross-references, in which one can cite an article by some abbreviated form with reference to a full citation only given in a footnote dozens or scores of pages away. By contrast, most other academic reference systems have a consolidated list of references at the end of an article.⁴⁰

There's good reason for the list of references at the end of the text system, as implemented for example by the MLA, APA, and Chicago styles: when the reader sees an abbreviated reference in the text, they know where to go to get the full reference. Even in law we have a rough version of this, but only in briefs written for judges. Judges, unlike the benighted readers of law review articles, at least have the benefit of a table of authorities to provide a one-stop place to look for the full citation associated with a given reference. But in law review articles, we just have *supra*.

³⁹ I'm aware of one defense of this use of their time: Bret D. Asbury & Thomas J.B. Cole, "Why the Bluebook Matters: The Virtues Judge Posner and Other Critics Overlook," 79 Tennessee Law Review 95, 97-99 (2011) argue that the typography (and even the signal system) trains students into the sort of attention to detail that will be expected of them as lawyers. This may be true, and certainly the practice of such skills is valuable. However, I question whether it is worth its opportunity cost. If the Bluebook didn't exist, we probably wouldn't want to invent it solely for pedagogical purposes. Instead of making our students learn the Bluebook, we could make them learn some similarly detailed system of rules that has actual legal meaning, such as a particularly complex structure from anywhere in the federal regulatory state (ERISA maybe). Then they could have the same practice in applying complex and excessively picky systems of rules, but also learn some legal doctrine at the same time.

⁴⁰ At least one other legal author has done so: Magat's (2010) critique of the existing footnote system sensibly includes a list of sources at the end, although she also makes use of cross-references.

In law review articles, we also have a lot of pages and a lot of footnotes.⁴¹ What this amounts to in practice is that you can be on page 75 of a law review article, and you see a claim that you disbelieve. Consulting the footnote attached to that claim—let's say it's note 385—you read "see Posner, supra n. 129 (asserting that my risible claim is true)." So, you write down the page number that you're on, and then you scroll (because, like everyone else in the world, you're reading a PDF) back and back and eventually find note 129, several minutes later.⁴²

I can't be the only one who often—shamefully—just doesn't bother? If I see a claim that I don't quite buy separated by hundreds of footnotes and a lengthy scavenger hunt through some law review article from the information necessary to read its source, a good half of the time I just surrender to the *supra* tax and read on with a shrug (especially if I've already had to search through the same article for five or six other sources). How many dubious or outright false claims have I swallowed—how much of my intellectual integrity have I compromised—rather than flip back and forth and back and forth between arbitrary sections of a PDF over and over? How about yourself, dear reader?⁴³

The author and the editor have an even worse job of it. Someone has to create all those cross-references. You could make them by hand, but then God help you the moment you try to do any editing and now find yourself with the task of renumbering hundreds of cross-references across a document itself possibly spanning hundreds of pages.

Or you could use Microsoft Word to do it. Here's the problem: Microsoft makes extremely bad software. Much of the time, Microsoft products fail in spectacular ways whenever you ask them to do anything remotely complicated or interesting.⁴⁴

⁴¹ It turns out that when you're in a discipline oriented around claims to authority, and your journals are edited by second-year trainees, you end up explaining a lot, and appealing to authority for those explanations a lot.

⁴² For some reason, these notes are never hyperlinked, and even if they were hyperlinked, one would still have to find one's way back to page 75 to continue reading where one left off. Nonetheless, hyperlinking them would be worlds better, but, alas, would force us all to stop pretending that law review articles are still primarily read with a bound paper volume in one's hands.

⁴³ I guess it could be worse. David Foster Wallace's Infinite Jest infamously has endnotes attached to the endnotes in what I can only interpret as a result of a bribe from Big Carpal Tunnel. But that's not the standard we should be measuring ourselves against.

⁴⁴ As I write this essay, for example, we're witnessing the spectacle of Microsoft attempting to integrate a version of ChatGPT into its Bing search engine, which has already started hitting on a New York Times reporter. Kevin Roose, "A Conversation With Bing's Chatbot Left Me Deeply Unsettled," New York Times, https://perma.cc/M8KY-BHJQ (Feb. 16, 2023). This is, to be fair, a significant improvement over Microsoft's last chatbot experiment, which almost immediately started heiling Hitler.

Microsoft Word is full of lots and lots of useless or barely useful functionality, all buried behind endless menus which are poorly documented and vary widely across versions, operating systems, and the like. That's why there's a cottage industry of consultants hanging around the edges of the legal profession offering Microsoft Word tests and training courses to lawyers in the name of "technical competence." (And before you let silly thoughts like "a poor craftsman blames his tools" come to your head, I will note that it is also the case that a poor toolmaker blames its users.) Any publication methodology that relies on a complex feature of Microsoft Word to be at all viable is living on borrowed time. It imposes hidden costs on users who, in addition to having to learn the Bluebook, must also navigate some Microsoft feature in whichever different way that feature operates across any version of Word and any operating system which the article might happen to touch. (Perhaps the next edition of the Bluebook should have a few hundred more pages included to explain in detail how to carry out idiosyncratic Bluebook tasks like cross-referencing footnotes and making small capitals in every version of Microsoft Word for every operating system that has ever existed.)

Cross-references also interact quite badly with the other major nightmare that Word inflicts on the law journal process, namely track changes. Every time a footnote is moved or added, Word has to create a bunch of changes across the rest of the article which then do one of four things, seemingly at random:

- 1. Show up in track changes with the correct (new) numbers—further inflating those thousands of changes which the poor authors and editors must review;
- 2. Not show up in track changes but have the correct (new) numbers in the text—this would be ideal, but I've never actually seen it;
- 3. Show up in track changes but with incorrect cross-reference numbers—perhaps because some of the cross-reference changes get tracked and others don't, leading to vast reviewing confusion; or

Rachel Metz, "Why Microsoft Accidentally Unleashed a Neo-Nazi Sexbot," MIT Technology Review (March 24, 2016) https://perma.cc/97R2-YC2D. And then there's Microsoft Excel, whose terrible design is so unavoidable that scientists have given in and come together to change the names of a bunch of genes in order to avoid Excel misinterpreting them as dates. James Vincent, "Scientists rename human genes to stop Microsoft Excel from misreading them as dates," The Verge (August 6, 2020) https://perma.cc/4HTV-S3CL. As this essay approaches print, recent reports suggest that Microsoft is at least attempting to rectify the Excel auto-conversion features that caused so much trouble for the discipline of genetics. Wes Davis, "Microsoft Fixes the Excel Feature that was Wrecking Scientific Data," The Verge (October 21, 2023) https://perma.cc/H9TN-NGJU.

⁴⁵ For example, a company called "Procertas" offers a law office technology class that appears to be about Microsoft products, at https://perma.cc/U3EE-7KKB.

4. Not show up in track changes but have incorrect cross-reference numbers appearing in the text—see above re: confusion.

Any way you shake it, using Microsoft to manage one's cross references in the context of tracked changes with multiple people and multiple computers touching a document ends up causing almost as much work as just doing it by hand.⁴⁶

No other citation style uses these cross references, apart from the occasional "ibid." (which the Bluebook authors, in their infinite wisdom, have decided to abbreviate to *id.* just to be different—and notwithstanding the fact that "ibid." *itself* is an abbreviation for "ibidem," Latin for "in the same place") which only refers to the immediately preceding citation, so the reader doesn't have to go on a round-the-world trip through the rest of the article.⁴⁷ That's because they're just not necessary. And there's nothing special about law that makes it more sensible for us to do things that way.

Needless to say, the rules about cross-references are also torturously arcane. Consider the rule for "supra." The Bluebook tells us that it can be used for:

legislative hearings; court filings; books; pamphlets; reports; unpublished materials; nonprint resources; periodicals; services; treaties and international agreements; regulations, directives, and decisions of intergovernmental organizations; and internal cross-references.

But it cannot be used for:

cases, statutes, constitutions, legislative materials (other than hearings), restatements, model codes, or regulations[.]⁴⁸

Quick! When can *supra* be used for regulations? If you don't read with the care of a transactional associate working on their first billion-dollar merger, you might miss that the list of what you can use *supra* for is separated by semicolons, and hence that the item "regulations, directives, and decisions of intergovernmental organizations" is meant to only permit the use of *supra*

⁴⁶ For my own writing, I usually write in markdown format and manage citations with Zotero, which works reasonably well, but, alas, it all has to be compiled to some Microsoft monstrosity before anyone else can edit it. This illustrates, I guess, that many of the problems detailed in this essay are less Bluebook problems than Bluebook combined with Microsoft problems, and to be fair, if you gave me the choice between killing off Microsoft Word or killing off the Bluebook, I'd happily *see generally* my way to *supra* for the rest of my life to see the profession produce its documents in essentially any other software. But given that Microsoft is a monopolist which controls the word-processing of the entire economy, while the law reviews who publish the Bluebook are merely monopolists who control the citation of just one profession, the Bluebook seems like a more vulnerable target.

⁴⁷ Even if some other discipline did borrow something like our *supra* system (perhaps in conjunction with reviving the disused "op. cit.") it wouldn't be so bad, because the articles in other disciplines aren't nearly so long and don't contain nearly so many footnotes.

⁴⁸ Bluebook 8.

for regulations of intergovernmental organizations—per the list of what you can't use *supra* for, separated by commas, all other regulations are right out.⁴⁹

This is confusing enough on its face that at least one academic law library has gotten it wrong—the University of Hawaii law library's list of "Weird Bluebook Rules" explains to its students both that they *can* and that they *cannot* use *supra* for regulations, losing the intergovernmental organizations modifier. But it's also needlessly arcane in a way which introduces ambiguity rather than eliminating it. Consider: clearly one can use *supra* for a regulation of, say, the World Bank. Clearly one can't use it for the Code of Federal Regulations. But what about the European Union? Have the member nations sufficiently shared their sovereignty that the overarching entity no longer counts as "intergovernmental?" (In the other direction, what if the United States had found some way to issue regulations under the Articles of Confederation?) But also, more fundamentally, why would you have different rules about cross references depending on the precise details of the sovereignty of the entity issuing a regulation?

The cross references should go posthaste.

VI. ABBREVIATIONS: INFLATION WITHOUT LEGITIMATE PURPOSE

The Bluebook has hundreds upon hundreds of pages of abbreviations in tables at the end—almost 300 pages of tables in the 2015 edition, the last one in which they were all printed.⁵¹ These abbreviations have met critical notice before—Judge Posner, for example, has remarked that the aggressive obscurity of the abbreviations resemble the situation one would find if letters

⁴⁹ David Ziff has suggested to me that this rule makes sense insofar as it forbids the use of *supra* in the kinds of legal authority where the reader needs to immediately see the institutional identity of the author in order to gauge that authority. (Alexa Z. Chew, "Citation Literacy," 70 University of Arkansas Law Review 869 (2018) is an extremely helpful analysis of similar issues rooted in the importance of the way that legal citations helpfully bundle in institutional authority.) However, it seems to me that this could be drastically streamlined just by prohibiting the use of *supra* forms for authoritative legal documents. Also, if the Bluebook's authors wanted to follow the sensible procedure Ziff suggests, they ought to also forbid the use of *supra* in authoritative regulations from intergovernmental organizations. ⁵⁰ https://law-hawaii.libguides.com/c.php?g=125486&p=821513. Just to preserve this for when they notice it and fix it, also, https://perma.cc/R5ZC-KW7C. They refer to the 20th edition of the Bluebook, not the 21st which is the current, but the rule in question is the same across both the 20th and 21st editions.

⁵¹ Interestingly, Hein sells a full-fledged "Dictionary of Legal Abbreviations"—
https://perma.cc/N6T9-H7PB—judging by the fact that the book is sixty-five dollars and 1181 pages,
one imagines it's rather more complete than the abbreviations in the Bluebook. This is surely a valuable
reference to the poor lawyer confronted with some random abbreviation buried in a footnote in, I
dunno, some kind of municipal traffic court decision or something—although one must also wonder
why our discipline has gotten quite so prolific with our abbreviations. Interestingly, the author of this
dictionary, Mary Miles Prince, is also the "Coordinating Editor" of the last several editions of the
Bluebook and is credited as such (e.g., Bluebook viii).

were taxed.⁵² Of the examples Posner gives, my favorites are probably "B.T.A.M. (P-H)" and "AIPLA Q.J." Indeed, it's hard to figure out why these abbreviations make any sense at all—in the age of e-filing and reading law review articles in PDF, the fanatical abbreviation of everything clearly does not, for example, serve much of a cost or environmental goal in terms of using less paper.

A cynical reader might imagine that the point of the ever-increasing list of abbreviations is to force people to buy new editions of the Bluebook every five years just to be able to translate the new incomprehensible abbreviations one finds in law review articles to actual sources. But a moment's reflection suggests that can't be it either, for the Bluebook doesn't provide a translation table from abbreviations to original sources, just the other way around. At any rate, most lawyers confronted with one of those bizarre abbreviations in a citation would probably promptly put it into Lexis or Westlaw to decipher it.

But our cynical reader isn't done yet, for there is a story we can tell in which the abbreviations are useful and, indeed, manifestly meet the demands of the Bluebook's customers. But it's not a pretty one. Lawyers have long been subject to page limitations in briefing before courts, & th mor u can abbrev, th fw'r pgs u uz. Lest the reader think I'm baselessly attributing a manipulative attitude to the authors of the Bluebook, I observe that those authors admit as much right at the beginning of the current edition. In the preface, they say that "[t]o address word limit constraints in court documents, [rule] B6 now provides practitioners with the option of closing up abbreviations in reporter names." Looking at rule B6, it becomes clear that "close up" means what the preface hints—to omit the space between periods in an abbreviation in order to convince Microsoft Word to reduce the number of words it counts. In the words of the Bluebook:

Because many court systems impose word limits on briefs and other documents submitted to the court, abbreviations in reporter names may optionally be closed to conserve space, even if they would normally be separated under this rule. For example, "S. Ct." would become "S.Ct." and "F. Supp. 2d" would become "F.Supp.2d."⁵⁴

This seems consistent with the idea that the point of the abbreviations in the first place is to artificially shrink the apparent length of legal documents. HowlonguntiltheBluebookendorsessentenceslikethis?

⁵² Posner (2011, 853).

⁵³ Bluebook viii., also online at https://perma.cc/K5YZ-YNCJ.

⁵⁴ Bluebook 9.

Here I must note one caveat. The Bluebook's *descriptive* function and its *prescriptive* function are different. With respect to foreign jurisdictions in particular, the Bluebook's abbreviations rules might be useful insofar as they coincide with the abbreviations used by courts and other legal sources in the jurisdiction in question. Under those circumstances, the Bluebook can serve as a kind of codex, permitting the U.S. lawyer who is reading, say, a British case to make sense of something like "Anisminic Ltd v Foreign Compensation Commission [1969] 2 AC 147." This is surely virtuous, but that's an independent question from whether U.S. lawyers should be required to use abbreviations in their own writing just because foreign courts do. 55 And none of this explains why we all have to abbreviate "Journal" as "J" and all the rest. 56

In the final accounting, we have three candidate justifications for the abbreviations, all of which are defective in whole or in part. The first justification is to comply with court rules specifying page and word limits. That justification is illegitimate: courts have word limits for the sake of judicial economy and fairness between the parties, and rules designed to evade those limits undermine those goals at worst, and at best simply kick off an arms race between lawyers and judges in which judges adopt more strict and precise length limitations (such as switching from page limits to word limits) and lawyers, aided by the Bluebook, invent new evasions (such as "closing up" abbreviations). The second justification is to permit American lawyers to interpret abbreviations in foreign materials. But this only justifies the Bluebook providing information about foreign abbreviations; it doesn't justify requiring writers to use them, and it doesn't justify requiring abbreviations for generic terms like "journal" or American sources.

The third justification is simple environmentalism: abbreviations cause law reviews to use less paper. I accept that there may be some environmental benefits from Bluebook abbreviations but question the degree of that benefit in a world where most law review articles are read in electronic format. I also note that there are many other reforms that law reviews could adopt to reduce their environmental impact. For example, they could reduce the number of print copies they provide—some journals still make paper offprints available to authors, which seems utterly wasteful in 2024. More fundamentally, they

⁵⁵ There might be an argument from consistency for doing so, except that lots of judges at least in the US don't follow the same rules as the Bluebook, so following the Bluebook is unlikely to achieve any such consistency. Moreover, sticking to our British example, I note that the Bluebook actually does seem to vary from the British usage, albeit in the beneficial direction of requiring more information by telling users to add the court name to these "AC" citations, which might be from the Privy Council, the House of Lords, or, perhaps, the new U.K. Supreme Court.

⁵⁶ I do confess that "J" is inoffensive because it is at least common and obvious.

could reduce the number of footnotes by getting past the footnote-on-every-sentence culture.⁵⁷ In a cost-benefit analysis those other reforms would do little harm for lots of conservation benefit, whereas the proliferation of abbreviations has significant costs and conservation benefits that are far from obvious.⁵⁸

VII. A RESPONSE TO ZIFF

The most full-fledged defense of the Bluebook of which I'm aware is a 2017 essay by University of Washington Professor David Ziff.⁵⁹ Ziff's defense, which draws heavily on the rules versus standards debate in legal theory more broadly, is persuasive in many respects, and he and I have had many enlightening and amusing exchanges online over the years about our polar opposite feelings about the Bluebook (a sentence that, in context, I fear may read much like "Brutus is an honorable man").

Ziff's argument, in abbreviated form, is as follows. The primary function of the Bluebook is to serve the needs of the production of legal scholarship, which is typically done by vast teams of student editors working on large articles in generalist journals. In such an environment, certainty about how to treat every citation substantially reduces coordination costs and errors, and extremely detailed rules are the best way to get to such certainty. We might add in support of Ziff's argument that the extreme length of law

⁵⁷ Here's one simple substantive reform to cut down on the number of footnotes: trust authors to summarize ordinary scholarly sources (basically anything other than core legal materials) with a single citation. Suppose I write a paragraph describing the argument of some other article that I'm using as an input to my own argument. Under current law review practice, I would be obliged to stick a footnote at the end of every descriptive sentence within that paragraph, often with a "pincite" to the specific page on which the described material appears. In addition to being wasteful, this has two substantive flaws. First, it reflects a bizarre distrust of professional scholars, both as readers and as writers, who are capable of summarizing some document and verifying that summary for themselves. Second, the interpretation of someone else's work is often a form of meaningful intellectual synthesis which is a terrible match to the id-and-pincite method of citation. For example, I have recently written a couple of papers for law reviews drawing on the philosophy of G.W.F. Hegel. The task of summarizing one of Hegel's ideas cannot be reduced to citing specific portions of his texts, because it's typically impossible to understand how one part of the text means the thing one says it means without also understanding its interaction with several other parts of the text. This is often achieved by studying multiple of the texts together along with the secondary literature. It simply cannot be reduced to a pincite. Instead, I should just be able to cite the source as a whole at the end of the paragraph and move on.

⁵⁸ Also, we have to remember that the Bluebook still prints—and, judging by the number of copies I see floating around in the halls of the law school, sells—numerous paper copies. If it added new abbreviations less frequently, perhaps it could produce fewer new editions, and save some paper that way.

⁵⁹ David J.S. Ziff, "The Worst System of Citation Except for All the Others," 66 Journal of Legal Education 668 (2017). Asbury and Cole (2011) have another defense, but their defense, while interesting and in some respects compelling, rests on somewhat narrower grounds; I have addressed it at several other points in the notes to this essay.

review articles relative to those of other disciplines, as well as the increasing interdisciplinarity of legal scholarship, increases the risk of underlying coordination costs. Student editors might have to manage references to a vast array of diverse materials without being able to rely on well-understood disciplinary conventions to manage uncertainty.

Yet while Ziff's argument certainly justifies a substantial degree of rule complexity—it explains why we might reasonably expect there to be more rules than, say, the APA or the MLA have—it fails to justify the bulk of the Bluebook. Let's begin with those hundreds and hundreds of pages of abbreviations: unfortunately for the enterprise of using Ziff's argument in their defense, the rule "no abbreviations" is just as determinate as to every case covered by the vast table of abbreviations and can be implemented with much less busywork. The reader who accepts Ziff's argument in its entirety can nonetheless tear off about half of the pages of the Bluebook and throw them straight into a furnace (plus delete much of the website) with no loss whatsoever to the cost-saving function of certainty.⁶⁰

In general, adding complexity to rules only makes them more determinate if the complexity resolves ambiguity or contradiction. But many of the Bluebook's rules do no such thing—instead they add complexity for complexity's sake. Take the example I gave earlier, according to which one may not use *supra* for any regulation *except* regulations of an intergovernmental organization. The same rule says that one cannot use it for any legislative materials *except* hearings. Those distinctions serve no purpose. It would be just as determinate, and thus give just as much guidance to overworked law review editors, if it were permitted to use *supra* for every source. Even a small change like forbidding *supra* for all regulations and all legislative materials rather than carving out those idiosyncratic exceptions would reduce complexity with no countervailing cost.⁶¹

Actually, the "every source" rule would be more determinate. By adding complexity, the *supra* rule also increases interpretive freedom in a way that runs contrary to the goals Ziff expresses. Thus, consider that on one interpretation of the rule, one can use *supra* for the transcript of the hearing of a Congressional committee but not for the committee report it generated.

⁶⁰ Ziff (2011, 686) notes that Judge Posner's instructions for his clerks recommend throwing out most of the abbreviations but keeps a few idiosyncratic ones like "Ry." That's on Judge Posner: he should have just thrown them all out.

⁶¹ The cross-references offend Ziff's core thesis that the point of the Bluebook is to permit efficient coordination among large teams of editors on large documents in a more basic way for the reasons described above. The more hands (and software versions—different years of Microsoft Word, different operating systems) that touch an article, the more opportunities there are for finicky Microsoft software to go horribly wrong. In an environment like the one Ziff describes, the less one has to rely on rarely used and even-more-rarely debugged Microsoft software features, the better.

However, on another interpretation of the same rule, a committee report falls within the provision permitting *supra* for "reports" in general. It all depends on whether we interpret "legislative materials" to include committee reports, or, contrariwise, interpret "reports" to include those reports—or, perhaps, interpret both of those terms to include committee reports and then apply something analogous to the canons of statutory interpretation (themselves infamously indeterminate) to them?⁶²

A basic criterion of legal rationality is to treat like cases alike, not to proliferate arbitrary distinctions. If the IRS promulgated a regulation providing that, say, redheads had to write their tax returns in cursive, it would be struck down as arbitrary and capricious under the Administrative Procedure Act. Sadly, no court has the authority to make the Bluebook's authors give reasons for the whimsical rules they make.

This seems to be a general pattern for the Bluebook: by adding complexity to the system of rules to account for special cases, the authors simply add more ambiguity, because the boundaries of their special cases—in the context of an economy and a society of increasing complexity over time—also turns out to be ambiguous.⁶³ (This is a point particularly relevant to any Bluebook authors who may ultimately read this essay: please, *please*, don't resolve the ambiguities I've described in the *supra* rule by adding a special rule for committee reports and another special rule for the European Union. Trust me, you'll just make it worse!)

To illustrate, I opened the Bluebook at random a few times. The first time, I landed on page 177, which tells us that "[a]rchiving of internet sources is encouraged, but only when a reliable archival tool is available." The reader is not told how to determine when an archival tool is reliable—they're given examples which are clearly reliable (archive.org and perma.cc), but what about others? A judgment call is required, and with it, all of the problems Ziff fears about consistency and coordination. This rule was doubtless a response to the proliferation of archival tools, which themselves are responses to the problem of "link rot." But because the world is not static, the new rule inevitably leads to new judgment calls.

The second time, I landed on page 101, which calls for numerous judgment calls. In case names, unions are to be cited only in their "smallest unit," which, I guess, requires the author or editor to do research into Union unit sizes? Moreover, "a widely recognized abbreviation of the union's

⁶² On indeterminacy and the canons, Karl N. Llewellyn, "Remarks on the Theory of Appellate Decision and the Rules or Canons About How Statutes Are to Be Construed," 3 Vanderbilt Law Review 395, 401-406 (1950) is instructive.

⁶³ The attentive reader may suspect that at bottom this point is just legal realism applied to the Bluebook. *Mea culpa*.

name" is to be used. Now we have to decide what's "widely recognized." UAW is given as an example, but how about ILWU? AFSCME? Again, it's pretty clear what must have happened here: at some point, there was a single rule for unions, like "cite their full legal name." Then some stumbled across a case where a union had an extremely long name—perhaps it clashed with some other rule on length of citations, or perhaps it just annoyed someone trying to meet a court's page limit—and so a new rule was created. But because the world is not static or bounded, that rule increased, rather than decreased, the difficulty of coming to a consensus determination of what to do.

Some of the rules, of course, have complex judgment calls built in. We're back to the signals. The whole point of the signals is to embed a nuanced legal judgment into the citation itself. But even holding those judgments constant, the signals still leave a substantial amount of discretion and hence potential disagreement. Consider that the law review editor engaged in "sub-citing" must come to a decision about, for example, what to do when multiple sources support some claim: does one denote the first with no signal and the second and subsequent with "see also," or does one denote one of them with "see e.g.?" As far as I can discern, the difference between those choices turns on whether it's the case that "citation to [other sources] would not be helpful or is not necessary," inherently a judgment about which multiple editors may disagree.

At bottom, I don't think Ziff and I disagree on principle. It would be lovely to have a complete and determinate system of citation which left overworked law review editors and legal writers no decisions to make. But we're not going to get that—it's simply not possible, not in an ever-changing world. In such a world, adding a new rule to address some situation where an editor might have to make a judgment call just pushes the judgment call back a step. The best we can do is make simple rules that are readily attached to the underlying goals of the system of citation, combined with decision rules to resolve conflicts, and then permit authors and editors to exercise their judgment. To increase consistency, complex rules might be added *only when they can easily be automated*, and thus can be implemented without any additional work for anyone else. Moreover, we should refrain from fetishizing consistency where it does not aid readers. The world won't end,

⁶⁴ Bluebook 62-63.

⁶⁵ The abbreviations are the most obvious case here. With reforms to be described below which could get law journal articles and such into citation managers, it would be fairly easy, if the Bluebook's authors really insist on sticking to the abbreviations, to automate the abbreviation of things like journal names. At least, it would be easy so long as the Bluebook helps, by, for example, releasing its abbreviations in a machine-readable format (a simple JSON file would do) for free rather than making hyper-aggressive copyright claims about them (Malamud 2016).

for example, if different articles (or even different sections within the same article) make different calls about things like italicized periods or whether it's ok to use *supra* for Congressional committee reports.

VIII. SOME SIMPLE REFORMS (OR: IT'S 2024, CAN WE PLEASE USE SOME TECHNOLOGY?)

One way to eliminate a number of the Bluebook's usability problems would be to leverage the affordances made available by the fact that many users are reading law review articles and briefs on computers, and all are writing the documents that turn into and make use of legal references on computers.

A. DOIs Everywhere, Automate Everything!

The first is to adopt Digital Object Identifiers (DOI) within the citation system. A DOI is a widely accepted standard for referencing digital artifacts used in academic publishing under the auspices of the Crossref organization. Most journal articles not published by law reviews, as well as many e-books and similar artifacts, have DOIs assigned. DOIs can easily be converted to URLs with publicly accessible resolvers online, and thereby deliver a reader directly to an article or other source with no further searching. Because resolver services directly convert DOIs to URLs, they can also be hyperlinked within PDF documents as easily as URLs themselves. Finally, DOIs are intended to be persistent and immune to familiar problems of "link rot": organizations who assign DOIs assume an obligation to update stored metadata, including URLs for each object with a DOI.66

Recognizing the utility of DOIs, many other citation methods such as Chicago style and APA style prefer the use of DOIs to URLs. The Bluebook should do the same and require DOIs be provided for sources which have them in addition to ordinary textual citations both for sources with and sources without DOIs. This would significantly improve ease of access for readers of sources, insofar as readers would no longer be required to search a commercial database for each cited reference (for the same reason, it should streamline the workflow of student cite-checkers on journals). Moreover, where available, a DOI would ensure that the reader is seeing precisely the same version of a source as the writer, ameliorating confusion arising from, *inter alia*, reprints, pre-prints posted on SSRN, and other situations where sources may generate multiple versions.

This change would come with costs. At the beginning, it would increase workload for authors and student editors, who would be obliged to track

⁶⁶ Crossref, membership, https://perma.cc/8SSX-2G3R.

down DOI information in addition to other kinds of citation information. Hence, it would be reasonable to begin by making DOIs optional but encouraged, and to combine this move with (on the law school side) training in the use of modern citation managers such as Zotero and Endnote which can illustrate the utility of DOIs in reducing the workload of all participants in the production process.

As the last remark in the previous paragraphs suggests, the Bluebook cannot drive the adoption of DOIs single-handedly. They are only useful in the context of the transition to a broader adoption of technical tools to make the writing, editing, and publishing process easier. The most important part of this process is that law schools that host journals (or the journals themselves) must participate by acquiring DOIs for their articles. However, it is to be hoped that by requiring or encouraging DOIs where available, the Bluebook would encourage law review editors and law faculty to be aware of the existence and benefits of DOIs and encourage wider adoption. Adopting DOIs is likely to be beneficial to legal publishers, if for no other reason because they can increase readership and citation counts by facilitating ease of access. The countervailing costs are fairly minimal: Crossref has an annual membership fee which is scaled to a member's revenues from publishing—\$275 for revenue less than a million dollars, and \$550 for revenue less than five million (and if law reviews make more than that then I'm not really worried about their membership fee costs)—as well as a nominal fee of one dollar per DOI assigned.67

The other major cost is the maintenance burden of ensuring that canonical URLs are continually updated if they change on the host side. However, this cost can also be reframed as an advantage as it permits journals to control the features available to users on an ongoing basis. For example, if innovations in accessibility technology permit the production of PDF files which are more favorable to screen readers than current technology, a law review which controls access to a canonical URL at the other end of a DOI can immediately deliver the benefits of this new technology to its entire back catalog (or at least those portions of its catalog for which it retains the source files). At any rate, this additional maintenance burden would largely be optional: all that a journal would have to do to make the DOI system work would be to supply or contract for some permanent archive for the final versions of its works. Such archives are already readily available: many university libraries or cross-institutional academic organizations make repositories available to their users; members of the relevant institutions may submit documents to those repositories and have a

⁶⁷ https://perma.cc/LVL3-ED8A.

DOI assigned on the spot, which is maintained by the repository.⁶⁸ Journals at schools with such repositories could likely make use of existing infrastructure quite easily.

For subsequent authors DOIs also come with a major advantage: they're attached to *full metadata* for a source. Using modern citation manager software such as Zotero, an author can enter a DOI and immediately receive full bibliographic information for the attached source, such as journal, volume page range, and the like. The software can then generate citations in most formats automatically.⁶⁹ In addition to making citation much easier—no more memorizing the keyboard shortcuts for idiotic typography—this also would significantly reduce the cite-checking effort of student editors by reducing the number of Bluebook errors in submitted articles (and that, in turn, would reduce the nightmarish track changes crashes in the subsequent Microsoft Word document exchanges).

B. Cancel the Arms Race Between Bench and Bluebook

To the extent the purpose of abbreviations is to help lawyers cram more words in their briefs under the constraint of judicial page or word limits, the abbreviations are for that reason illegitimate. Judges are entitled to set length limits for filings and have those filings respected and followed in good faith. Blatant evasions of such rules such as the new rule permitting abbreviations to be "closed" should be immediately discarded. Come on.

To the extent the abbreviation tables exist merely as a guide to help the reader translate between actually observed legal writing and sources, they can be made optional but highly discouraged. The Bluebook ought to do that: discourage the use of abbreviations with the exception, perhaps, of a very small set of traditional and frequently used abbreviations such as to the main federal and state reporters and generic abbreviations such as "J." for journal and "L. Rev." It could go further and outright forbid all other abbreviations in academic writing while bowing to reality and permitting their use in court filings. And the complex abbreviations tables should be reversed: there should be a list of abbreviations which signifies their reference, to illustrate that the primary audience of the tables is the reader, not the writer. Finally, release the abbreviations in electronic form as a simple JSON file to permit easy automation.

⁶⁸ For example, the Northwestern libraries provide a digital repository called "Arch," which permits any Northwestern affiliate to upload a document which will be assigned a DOI and maintained by the library. https://perma.cc/9C56-N77D.

⁶⁹ Although Bluebook format may still be a little bit shaky, depending on the current status of the Bluebook authors' copyright claims in its required abbreviations.

C. Just get rid of the Typography, Cross-References, and Signals

Cross-references and arcane typography serve no purpose at all. No other citation system uses them. The only reform for those is abolition. The same can perhaps be said about signals, although the fact that at least some members of the judiciary seem to understand them as meaningful suggests that their removal is less likely.

Personally, I think that the universal difficulty that legal writers display in using signals correctly recommends their complete abolition. However, as a second-best solution and in view of the fact that some in our profession evidently believe that the signals are legally meaningful, the Bluebook authors ought not to be in charge of them. To the extent that the use of something like cf. in a judicial opinion changes that opinion's holding (for example by altering what we can conclude about the court's evaluation of a prior case, as in the examples Robbins gives), they are an appropriate subject for scholars, in their treatise-writing capacities, and jurists, in their capacity as creators of interpretive rules. The creation of interpretive rules to permit subsequent cases to make sense of the content of a judicial opinion is a familiar judicial function, famous from contexts such as the Marks rule on interpreting plurality opinions.⁷⁰ From a jurisprudential perspective, the interpretation and use of legally meaningful signals in a judicial opinion is a secondary rule, in Hart's sense. If signals have any meaning at all, it is a formal legal meaning, and that meaning should be spelled out in binding law by judges.71

D. Make as Much Machine-Readable as Possible

Human beings should not be typing citations. For academic sources, there are excellent citation managers, including both commercial software like Endnote, PaperPile, and RefWorks and free software like Zotero. There are ongoing efforts, such as Frank Bennett's Juris-M project (an adaptation of Zotero) to put such software to work for core legal sources as well. ⁷² Since many scholars and potentially also practicing lawyers learn which sources to consult and cite from other scholarship (as well as opinions and briefs), errors in citation as well as labor in typing and reformatting citations could be reduced close to zero simply by providing citations in machine-readable form.

⁷⁰ Marks v. United States, 430 U.S. 188 (1977).

⁷¹ Incidentally, doing so would also have the happy consequence of lifting the rules used for signals out of any possible claim to copyright status, per the Supreme Court's recent decision in Georgia v. Public Resource, 590 U.S. _ (2020).

⁷² https://perma.cc/L49C-HCDQ.

This is possible today. There are numerous formats, such as BibTeX and CSL (Citation Style Language) JSON that can just be loaded directly into a reference manager. If URLs or DOIs are included in citations in those formats, the user's citation manager can just go fetch the underlying source for them, if they have access to it, for example via an institutional subscription attached to the network that their computer is on. These citation files can be passed around—an author could turn one in with their article to a journal. When combined into a library in one's reference manager, they can also be preserved year-over-year, for example within a journal for the use of future editorial boards. Providing these with an article—either in the body of a PDF, to be copied and pasted, or in metadata—thus could save an immense amount of downstream labor for subsequent users of that article's references.

While it may expect too much from the technical capacity of the legal profession to impose the use of machine-readable citations in addition to the standard human-readable kind as a rule in the immediate future, we can take immediate steps to get closer today. It is possible right now to simply embed machine-readable references into a PDF file—this essay may serve as a demonstration, as the version of it made available by the Journal des Refusés contains an embedded file which can be directly loaded into a user's citation manager with the right software. The Ultimately, once enough tools have been developed to make this an easier exercise for journals that are not publishing essays by their faculty advisor who also knows how to program, the Bluebook should require that law reviews include such files and journals should require that authors include them with their submissions.

I recognize that such changes impose a learning curve. Indeed, this very essay reflects that learning curve. In its intermediate drafts, I have written a promise to embed machine-readable metadata into this very PDF. However, this step cannot be completed until the editing process is finished and we have a final PDF to embed the metadata into. I am thus at risk of

⁷³ See below for instructions on how to do so for yourself.

⁷⁴ Actually, I've already developed a tool that could serve this purpose. If you go online to https://gowder.io/citations you will find a web application that will enable you to feed it a textual citation file in any of the formats that the major citation manager software can import or export, plus a PDF (of the article containing those citations). The software I wrote will then add the citation information as metadata to your article and generate a modified PDF which you can then share with your readers. Readers who want instant access to all of your citations in their own citation manager can then simply go to the same web address and feed the PDF you gave them back to it, receiving in return a citation file which they can import directly into their own copy of Zotero, EndNote, or other reference management software. Of course, I'm a highly amateur programmer, so there might be bugs, but this also only took amateur programmer Paul Gowder a couple of days, and hence can serve as a demonstration that a professional programmer could trivially produce a more robust version of the software.

embarrassing myself: I *think* I know how to embed metadata into the PDF in an appropriate way, but I can't be sure until I actually try it, and it could turn out to be more difficult than I expect. These are the challenges of technical innovation. (Note to readers: I left this paragraph in the final version of this essay for the historical record, however, as footnote 74 will indicate, I succeeded.)

However, in mitigation of these technical costs I offer two points. First is to observe that there are also technical costs to the existing system. Recall that much in the law review production process depends on obscure features of Microsoft Word, and that Microsoft Word is sufficiently hard to use that there's an industry of consultants devoted to training lawyers in its features. The technological reforms I offer could reduce our dependence on Microsoft Word, for example, by automatically producing correctly formatted citations with the correct information and thus reducing the extent to which authors and editors must wade through thousands upon thousands of tracked changes. And software like Endnote and Zotero is *much* simpler and easier to learn than Microsoft Word.

Second, I claim that these are mostly early adopter problems. The beautiful thing about technical solutions to problems is that—provided one isn't reliant on a closed platform like Microsoft Word—making use of them tends to get easier over time. Consider again the process of embedding metadata into a PDF. Once I figure out how to reliably do so manually, most major programming languages have excellent PDF-management libraries, and it will likely be a matter of a couple of hours to automate the process so that I can just pass a CSL-JSON file and a PDF to, say, a Python script and get a PDF file with embedded metadata out. That will be enough for technically skilled users to easily do the same for their own articles. Thereafter, it would take a little more work to create an appropriate interface for non-technical users. Personally, I loathe graphical user interface programming, so if I'm the one to do it, it will probably end up being a fairly simple web-based application which permits users to upload the relevant files and combines them on a server somewhere. (Further note to readers: done. See https://gowder.io/citations.) But the point is, these kinds of steps are readily doable, and the skill exists within the legal profession to do it. (Consider again the valuable work of legal open-source programmers like Frank Bennett.)

Ultimately, with the reforms I propose, the Bluebook can be smaller, easier to learn, and much, much, easier for both academic authors and law

review editors to apply. Computers can do a lot of the work.⁷⁵ And our most high-achieving second-year law students can spend their time learning the law—or, Heaven forbid, actually contributing to society in a clinic—instead of italicizing commas at the rest of us.

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⁷⁵ Thirteen years ago, Magat (2010, 95-96) predicted that the rise of electronic articles and sources would naturally achieve something analogous to the reforms I propose here, such as the end to silly typefaces and spacing rules about abbreviations. Alas, since she made that optimistic prediction the Bluebook has grown by another ten percent or so. By contrast, Asbury & Cole (2011, 100-102) argue that letting computers take over legal citation would actually be bad, because it would sacrifice the advantage of training students in the capacity to do things like resolve conflicting and ambiguous citation rules with reference to their underlying purposes. As meaningful as this virtue of the Bluebook may be, it is in some tension both with the evident practice of the Bluebook's authors of adding more rules to handle every special case that comes up (rather than letting students work it out for themselves) and with defenses of the Bluebook such as Ziff's that rest on the hope that it may generate certainty to reduce the cost of collective labor.

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X. MACHINE-READABLE REFERENCES

Embedded into the metadata for this PDF is the list of references above in a machine-readable format known as CSL-JSON (the acronyms stand for "citation style language" and "JavaScript object notation," respectively). In order to access this metadata, you can simply go to https://gowder.io/citations and scroll to the bottom of the page, where you will find a section entitled "Get Citation Data Out of PDF." Click the button that says "select PDF with citations" and select this file. The application will download a file named "bluebookburning.json" to your downloads folder. (Depending on your platform, it might append an extraneous ".txt" to that name, which may safely be deleted.)

From there, you can import that file into Zotero or another reference manager. Then you can do things like cite the same sources in your own work, confident that the bibliographic information is correct (or at least as correct as what shows up in this essay), convert my references list to other formats or, if you know how to program, use computational methods to analyze the citations.