Critical Legal Research: Who Needs It?*

Nicholas Mignanelli**

“We shall be questioning concerning technology, and in so doing we should like to prepare a free relationship to it.”

—Martin Heidegger¹

This article builds on prior works to develop a framework for practicing and teaching Critical Legal Research in such a way as “to prepare a free relationship” between the researcher and AI-powered legal research. The author argues that it is only in doing so that legal innovation will continue to be possible.

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What Is Called “Critical Legal Research”?

¶1 The phrase “Critical Legal Research” (CLR), so far as it describes several distinct approaches to applying the insights of critical legal theory² to the legal

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** Lecturer in Law, Librarian Assistant Professor, and Reference & Instructional Services Librarian, University of Miami School of Law, Coral Gables, Florida. I wish to express my sincere gratitude to Michael Chiorazzi, Julie Graves Krishnaswami, Susan Nevelow Mart, Sarah C. Slinger, Nicholas F. Stump, and the organizers, sponsors, senior readers, and fellows of the 11th Annual Boulder Conference on Legal Information: Scholarship and Teaching, held at the American University Washington College of Law on July 12, 2019. I hasten to add that all views, as well as any errors, are mine.


2. Defined as “a diverse and inclusive canon of literature or ideas, including such schools as feminist legal theory, critical race theory, critical race feminism, LatCrit, queer legal theory, disability theory, law and socioeconomics and critical examinations of environmental law—the theoretical underpinnings of which were influenced by such foundational movements as legal realism, neo-Marxism, post-structuralism, and deconstruction.” Nicholas F. Stump, Following New Lights: Critical Legal Research Strategies as a Spark for Law Reform in Appalachia, 23 AM. U. J. GEN. & SOC. POL’Y & L. 573, 600 (2015).
research process, was first coined by Nicholas F. Stump in 2015. Yet the pioneering feminist legal scholar Mary Joe Frug may have been the first to apply critical theory to an arrangement of legal information.

¶ 2 In an article published in 1985, Frug examines the fourth edition of the Dawson, Harvey, and Henderson contracts casebook, employing reader-response criticism “to expose how the casebook functions to sustain and further” an ideology of gender that privileges men and masculine-associated characteristics over women and feminine-associated characteristics. So that no one will misunderstand her purpose, Frug explicitly states that “legal content, not interest group satisfaction, should be the appropriate standard for including material [in a textbook].” She argues, however, that an underlying bias against women undoubtedly alienates a number of female readers, making the casebook “a less effective learning device.” This, Frug opines, is especially troubling in view of the “power and authority that law casebooks have over their readers.” In one of the article’s most compelling passages, Frug writes,

> [a]lthough the editors have chosen to evade personal involvement and commitment in their casebook, they never acknowledge that the book’s neutrality is deliberately contrived; they do not admit that their casebook has a point of view. Thus, the editors are authoritarian about the casebook’s neutrality; they offer readers no information about what is left unsaid in their casebook.

She concludes by asserting that “[o]nly by continually re-thinking who we are and why we are making the choices we make can we free ourselves from the belief that our selves are constructed by our sexual identities.” It was this same critical impulse to question authoritarian neutrality and the subjective choices involved in the arrangement of legal information that compelled several law librarians and legal scholars to criticize the traditional tools of legal research.

¶ 3 In an article published in 1987, the noted legal information scholar Robert C. Berring recounts how the invention of the West Company’s comprehensive case reporting system in the late nineteenth century “undercut the theoretical basis of

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7. Id. at 1091.

8. Id. at 1097.

9. Id. at 1135.

10. Id. at 1109.

11. Id. at 1140.
CRITICAL LEGAL RESEARCH: WHO NEEDS IT?

The common law” by exposing the “inconsistencies of a system that contained so many constituent parts.”  

The West Company, Berring explains, then solved the problem it had created by introducing the West Digest System, which in turn “lent its structure to American law” and “saved the myth of the common law from what looked like its inevitable demise.”

“Like it or not,” Berring writes, “practitioners and researchers internalized the West structure, and it became the skeleton upon which the rest of the system was built.”

Berring’s thesis that the West Digest System is not merely a case-finding tool but also a structure that reshaped American law in its own image was, according to Richard Danner, “essential” to “a series of articles applying and responding to the use of the tools of Critical Legal Studies (CLS) to the process of legal research.”

In another article from 1987, Steven M. Barkan evaluates what implications CLS—specifically the CLS concepts of “the incoherency and indeterminacy of legal doctrine, the myth of legal reasoning, and the nature and effects of categorizing legal problems”—holds for the legal research process.

Focusing on “practice research” as opposed to scholarship, Barkan finds, the theory of deconstruction conflicts with the notion that legal research is a search for pre-existing, findable law as expressed in the writings of courts, legislatures, or agencies. If the meanings of legal texts are created as much by researchers as by the institutions that produce them, judicial opinions, statutes, legislative history materials, regulations and other sources are indeterminate. By attributing meaning to courts or legislatures, researchers can establish rules without admitting their own value judgements. In the name of “authority,” researchers can support any chosen position.

Regarding the “myth of legal reasoning,” Barkan notes that, according to CLS,

[the] search for the ratio decidendi, the rule of the case, leads nowhere. Published opinions report what judges say about particular fact situations and disputes that come before them. They record the language that judges must use to legitimize their decisions, but the real reasons for decisions are not expressed.

The subjective preferences of judges will determine how precedents and statutes are interpreted, which ones are followed, and which ones are ignored. The results come from those same political, social, moral, and religious value judgments from which the law purports to be independent. Ultimately, cases cannot be predicted or decided without reference to subjective preferences, even if these preferences are not the conscious basis of decisions.

Next, addressing “legal categories and reification,” Barkan explains that CLS acknowledges the necessity of categorical schemes but holds that “categorical

13. Id. at 25.
14. Id.
17. Defined, paraphrasing Frederick C. Hicks, as “the research typically done by lawyers, judges, and legislators in the performance of their functions in law offices, courts, and legislatures.” Id. at 621.
18. Id. at 628.
19. Id. at 630–31.
schemes are used to mask the incoherence and indeterminacy of legal doctrine” in that “[f]orcing facts and issues into categories inevitably causes us to gloss over the uniqueness of each case and to treat unequal situations as if they were equal.”

This leads to “reification,” a process in which “abstractions are taken for the concrete, and categories begin to be seen as tangible, real things . . . a way of manufacturing necessity,” and “[t]he categories are perceived as being built by history, human nature, and economic law, when in reality they are created and perpetuated by society’s dominant interests.”

Thus, legal research reifies fact situations to fit them into predetermined and reified schemes. Because we access research tools and resources through categories, published legal resources have played a major role in the reification process. The way that law is organized and categorized in our research sources affects its interpretation and results in a form of “bibliographic determinism.” This does not mean that law books control, or cause change in, the law. What it does mean is that legal resources can reinforce and reify dominant ideologies, can narrow perspectives, and can make contingent results seem inevitable. . . . Key numbers, indexes, annotations, footnotes, and cross-references set the limits of inquiry; they “narrow the window,” so to speak.

Barkan warns that “[w]e must be aware of the tremendous power that legal research tools have over the way we look at legal problems . . . because in law, more than any other discipline, the structure of the literature implies the structure of the enterprise itself.”

Finally, Barkan turns to the task of “domesticating” CLS. While acknowledging that “when CLS arguments against legal doctrines and legal reasoning are carried to their logical conclusions, there can be no legal research,” Barkan concludes, “we do not need . . . to accept the CLS arguments to appreciate their relevance to legal research” and “the CLS enterprise is worthwhile if it forces us to ask and answer important questions and to look critically at our assumptions and practices.”

Among them: “[h]ow much control do research tools assert over research practice and legal thinking?”

He points out that although “[j]urisprudence has moved far from the Langdellian position that viewed law as science . . . the structure of research tools has not changed since Langdell’s time.” He speculates that “[a]n enlightened understanding of legal research could result in better resources, better practices, and better research; ultimately, it might help improve the way legal thinkers respond to social problems.”

This was, however, not Barkan’s final word on the matter. As Danner puts it, “in an occasionally acerbic response to Barkan’s article, Peter C. Schanck challenged the notions that the digest and other research tools play a role in lawyers’
thinking about the law.” 30 Responding to Schanck’s contention that “[m]ost lawyers suffer under no illusions about the law’s ‘seamless web’ or perfect coherence . . . [and that] . . . key numbers, headnotes, indexes, and so forth have had little or no impact on either the content of our law or our understanding of the legal system,” 31 Barkan counters,

[m]any lawyers never look through windows, and others cannot afford a window’s view. As Schanck states, many lawyers never use digests. Some never consult indexes, treatises, or finding aids. Computer-assisted legal research systems, although heavily used by some lawyers, are still beyond the means of significant segments of the legal profession. For many lawyers, legal research is no more than consulting a jurisdiction-specific subject treatise and reading a few cases. Some lawyers do legal research only through law clerks and paralegals who are much less sophisticated in law and the workings of the legal system. Some lawyers never do legal research. 32

“Most lawyers,” Barkan rejoins, “operate within the parameters set by others.” 33

¶ 9 Barkan ends his response to Schanck with a call for the recognition of the importance of interdisciplinary materials to the legal research process. He writes,

[m]any legal decisions cannot be made apart from their economic, social, historical, and political contexts, and are often dependent upon business, scientific, medical, psychological, and technological information . . . Secondary, interdisciplinary, and nonlegal sources can suggest how cases and statutes should be used and why particular legal arguments should win. They can bring some coherence to legal thinking. 34

Barkan advises that “[i]t is only when all types of relevant, and necessary, information are of acceptable quality and are equally accessible to all participants in the legal process that we will be able to consider our research systems satisfactory.” 35

¶ 10 Two years later, the preeminent Critical Race Theorists Richard Delgado and Jean Stefancic built on the respective works of Berring and Barkan to articulate a theory of how traditional legal research methods stifle legal innovation and law reform. 36 Calling this phenomenon the “triple helix dilemma,” they theorize that the Library of Congress Subject Headings, the Index to Legal Periodicals, and the West Digest System “function rather like molecular biology’s double helix” to “replicate preexisting ideas, thoughts and approaches.” 37

¶ 11 To demonstrate their assertion, they invite readers to consider the plight of Black women who wish to sue “for job discrimination directed against them as Black

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32. Steven M. Barkan, Response to Schanck: On the Need for Critical Law Librarianship, or Are We All Legal Realists Now?, 82 Law Libr. J. 23, 30 (1990) (note that Barkan was writing prior to widespread Internet access and the proliferation of online legal resources).
33. Id. at 31.
34. Id. at 34–35.
35. Id. at 35.
women.”38 While attorneys at that time could locate “a large body of case and statutory law” using the headings “race discrimination” and “sex discrimination,” “no category combine[d] the two types of discrimination.”39 Thus, the structure of the indexing systems forced attorneys for such a client to file suit “under one category or the other, or sometimes both.”40 Yet “Black women [would] lose if the employer [could] show that it had a satisfactory record for hiring and promoting women generally (including White women) and similarly for hiring Blacks (including Black men).”41 Therefore, “[t]he employer [would] prevail even if it had been blatantly discriminatory against Black women because the legal classification schemes treat Black women like the most advantaged members of each group (White women and Black men, respectively), when they are probably the least advantaged.”42 Delgado and Stefancic add that “legal scholars have [now] created the concept of intersectionality and have urged that Black women’s unique situation be recognized, named, and addressed” but that “until the lacuna was recognized and named, legal classification systems made it difficult to notice or redress.”43

¶12 Delgado and Stefancic urge that “[r]eform now will require disaggregation of the current dichotomous, classification scheme, creation of a more complex one, and reorganization of the relevant cases and statutes accordingly.”44 They warn, however, that “[w]ord-based computer searches solve only part of the problem” because “the efficiency of word-based searches depends on the probability that the searcher and the court have used the same word or phrase for the concept in question.”45 Furthermore, “computerized research can ‘freeze’ the law by limiting the search to cases containing particular words or expressions”46 and even might “discourage innovation and law reform” by “legitimiz[ing] bias and oversimplification.”47

¶13 They suggest that the two preferable avenues for breaking free of the triple helix dilemma are (1) looking to “divergent individuals,” i.e., “thinkers . . . whose life experiences have differed markedly from those of their contemporaries” and whose ideas “offer the possibility of legal transformation and growth”48; and (2) using “[o]ur bondage” as “a route to transformation” by closely examining legal indexing systems for greater insight into “the very conceptual framework we have been wielding in scrutinizing and interpreting our societal order.”49 This will allow us to determine “whether that framework is the only, or best means of doing so” and to “turn that system on its side and ask what is missing.”50

39. Id.
40. Id. at 219–20.
41. Id. at 220.
42. Id.
43. Id.
45. Id. at 220–21.
46. Id. at 221.
47. Id. at 221 n.93.
48. Id. at 223.
49. Id. at 223–24.
50. Id.
¶14 In a subsequent article published two years later, Stefancic and Delgado speculate whether the “electronic revolution” (i.e., the advent of legal databases, CD-ROM technology, and electronic publishing) will converge with “outsider jurisprudence” (i.e., CLS, feminist jurisprudence, and Critical Race Theory (CRT)) to accelerate law reform or, alternatively, cancel it out.51 Weighing the shortcomings of keyword searching and the high cost of computer-assisted research against the promise that a newfound “cut and paste” approach to opinion writing might allow outsider jurisprudence to “enter the mainstream more rapidly than [it] otherwise would have,”52 they conclude that “[t]he question is still open” and “[t]he situation is still elastic.”53

¶15 In 1992, Jill Anne Farmer pushed the discourse further by undertaking a poststructural analysis of the legal research process.54 Defining poststructuralism as a rejection of “master narratives and foundational claims that purport to be based on science, objectivity, neutrality, and scholarly disinterestedness” and an “analytical shift” from the “literary (or cultural) product” as “work,” i.e., “a closed entity with a definite meaning,” to the “literary (or cultural) product” as “text,” i.e., “an ongoing dialogue,”55 she concludes that the emphasis on citation to “what came before” in legal research is as responsible for the self-replicating nature of American law as classification systems.56

¶16 Farmer suggests that law librarians can “help alleviate some of the conceptual lock on legal information” in two ways.57 First, by teaching patrons that “what they are able to find is not equivalent to a whole universe of information or even a random subset, but rather to that particular universe found economically, politically, and/or personally expedient or essential to publishers, editors, and librarians,” as well as “the importance of different conceptual frameworks and how to analyze information packaging and content in these terms.”58 Second, by “go[ing] beyond the usual collection policies to acquire nonlegal material that reflects on social, political, and cultural theory.”59

¶17 In 2007, Delgado and Stefancic revisited their earlier works to assess whether computerized legal research had overcome the triple helix dilemma and accelerated legal innovation and law reform as they had hoped.60 They conclude, however, that “[c]omputer-assisted legal research may in fact impede the search for new legal ideas, slow the pace of law reform, and make the legal system less, not more, just.”61 They assert that the problems with computerized research lie in the way the medium influences the researcher:

52. Id. at 857.
53. Id. at 858.
55. Id. at 392.
56. Id. at 400–01.
57. Id. at 402.
58. Id. at 402–03.
59. Id. at 403.
61. Id. at 310, ¶ 8.
On the user’s side, computer searching can mire the researcher in a sea of facts. It can suppress browsing and analogical reasoning, while giving the impression that one is freer, more creative than one really is. The reason behind many of these limitations is the same. The very categorical structure that limited paper-and-pencil searching, building in a bias for the status quo, appears in a new form—the straitjacket of conventional categories now limits the questions one may ask the computer and the searches one may devise.62

In the face of these problems, Delgado and Stefancic suggest that “when searching for a new legal remedy, we should turn our computers off.”63 Accordingly,

[l]awyers interested in representing clients who (unlike corporations) do not find a ready-made body of developed law in their favor need to spend time with the computer shut down, mulling over what an ideal legal world would look like from the client’s perspective. Such lawyers need to practice thinking “outside the box,” reinventing, modifying, flipping, and radically transforming legal doctrines and theories imaginatively and in brainstorming sessions with other reformist lawyers.64

This is because “[a] computer is good at showing you what is” but “cannot show you what might be.”65 To believe that it can “is an abdication of one’s responsibility as a lawyer and an agent of change.”66

¶18 In a 2015 article, Stump revives CLR, giving it practical application in the ongoing battle to end mountaintop removal mining in Appalachia.67 In the process, he unifies and synthesizes the above insights and methods as follows: (1) “a more targeted utilization of commercial and non-commercial legal resources,” (2) “an increased practitioner reliance upon a wide range of theoretical materials,” and (3) “the cultivation of synergistic brainstorming sessions.”68 He further explicated these strategies as the internalization of “critical insights,” the utilization of “concept-based research,” reliance on “alternative legal resources,” the expansion of one’s search to include “legal scholarly and multidisciplinary” sources, and unplugged brainstorming.69 In a 2017 article, Stump expounds upon the unplugged brainstorming method, theorizing about the incorporation of “civil disobedients” in these sessions.70 He uses Appalachian residents who engage in civil disobedience activities to stop mountaintop removal mining as an example.71

¶19 This present work takes its orientation from the above line of articles, reenvisioning CLR as a safeguard against the pitfalls of new legal research tools powered by artificial intelligence (AI) that, in the author’s view, pose a far greater risk to legal innovation than classification systems, citations, or keyword searching ever has.

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62. *Id.* at 318, ¶ 28.
63. *Id.* at 328, ¶ 50.
64. *Id.*
65. *Id.*
66. *Id.*
68. *Id.* at 574.
69. *Id.* at 618–23.
71. *Id.*
The Question Concerning Technology

“Will artificial intelligence reify categorical schemes even more, permitting us to find only what artificial intelligence shows us?”

—Steven M. Barkan

¶20 During a recent library director search at a law school in the southeastern United States, a legal writing instructor attended each of the candidate presentations and, during the question and answer period at the conclusion of each, asked the presenters why legal research instruction remained important in light of the fact that “AI will soon be able to do all of your research for you.” Other faculty members in attendance nodded their heads in agreement. Though merely an anecdote, this interaction encapsulates a change in the way those outside of the law library think about the future of legal research.

¶21 One can hardly criticize the legal writing instructor, for she was simply reacting to the rise of AI as a major buzzword in the legal industry. Countless articles and blogposts have heralded the arrival of AI, touting the many ways in which it promises to radically transform the practice of law. AI is best understood as a technology in which computers “perform tasks normally viewed as requiring human intelligence, such as recognizing speech and objects, making decisions based on data, and translating languages.” AI can be divided into two techniques: “logic and rules-based engines” and machine learning. In the logic or rules-based approach, “subject matter experts” develop rules that are then “used to automate processes.” Machine learning, on the other hand, employs algorithms that “discern patterns in data and infer rules on their own.”

¶22 AI was first conceptualized by a group of computer scientists meeting at Dartmouth College in 1956, but only recently has computing power allowed for the actualization of their aspirations. Today in the legal profession, AI programs successfully perform document review (using predictive coding to flag relevant documents more quickly, accurately, and efficiently) and contract analysis (assisting attorneys in the identification, extraction, and analysis of “business information contained in large volumes of contract data” and allowing for the creation of “contract summary charts for [mergers and acquisitions] due diligence”). In the realm of legal research, AI allows for natural language searching and retrieves relevant documents as determined by the behavior of prior users and the rules set forth in the underlying algorithms.

75. Id.
76. Id.
78. Donahue, supra note 73.
79. Id.
¶23 While early law library literature evaluating the use of AI tended to be speculative,\textsuperscript{80} deferential,\textsuperscript{81} or deterministic in outlook,\textsuperscript{82} recent articles have taken a more critical approach.\textsuperscript{83} Of course, law librarians should not irrationally resist AI or any technology but nor should we passively accept any claim to objectivity or neutrality. As the German philosopher Martin Heidegger once wrote, “[e]verywhere we remain unfree and chained to technology, whether we passionately affirm or deny it. But we are delivered over to it in the worst possible way when we regard it as something neutral.”\textsuperscript{84} The American mathematician Cathy O’Neil relates this same sentiment to AI: “algorithms [are] being presented and marketed as objective fact, [when] a much more accurate description of an algorithm is that it is an opinion embedded in math.”\textsuperscript{85} Continuing in this line of thinking, the next two subsections criticize AI-powered legal research on two counts: (1) its tendency to conceal the legal research process and (2) its propensity for further entrenching the biases of society’s dominant interests.

Concealing

“[T]here still stands the presuppositions that humans have control over the essence of technology. In my opinion, this is not possible. The essence of technology is not something that humans can master by themselves.”

—Martin Heidegger\textsuperscript{86}

¶24 The legal research process in its earliest incarnation consisted of a lawyer or judge directly consulting volumes of statutes and cases. Legal training, and then the repetition of information retrieval, allowed the early legal researcher to internalize the law’s structure to easily identify and access the material that he believed relevant to the facts at hand. Yet, as the law grew, new tools became necessary to mediate between the legal researcher and legal information. Thus, all legal research technologies, even the oldest ones, partially conceal information, omitting material that the creator thinks irrelevant.

¶25 Consider a tool as simple as the index, defined by \textit{Black’s Law Dictionary} as “[a]n alphabetized listing of the topics or other items included in a single book or

\begin{itemize}
  \item \textsuperscript{80} See, e.g., Nancy B. Talley, \textit{Imagining the Use of Intelligent Agents and Artificial Intelligence in Academic Law Libraries}, 108 LAW LIBR. J. 383, 2016 LAW LIBR. J. 19.
  \item \textsuperscript{81} See Mark Gediman, \textit{Artificial Intelligence: Not Just Sci-Fi Anymore}, AALL SPECTRUM, Sept./Oct. 2016, at 34, 36 (“Librarians can create the processes and procedures to provide the current information needed to keep the application up-to-date and relevant.”).
  \item \textsuperscript{82} See Jean P. O’Grady, \textit{Hand in Hand with IBM Watson}, AALL SPECTRUM, Sept./Oct. 2015, at 18, 21 (“As a profession, it is important that we don’t identify with the pre-Gutenberg scribes. . . . Take a deep breath; we are living in a post-Watson world. Everything is about to change.”); see also Ed Walters, \textit{Read/Write: Artificial Intelligence Libraries}, AALL SPECTRUM, Sept./Oct. 2017, at 21, 23 (“A great shift is coming, as great as the Industrial Revolution or the invention of electricity. The most successful libraries of the next 10 years will be the ones that embrace the new tools of the trade.”).
  \item \textsuperscript{84} Heidegger, \textit{supra} note 1, at 4.
\end{itemize}
documents, or in a series of volumes.” The index directs the researcher to only that information that the indexer believed essential to each entry. In using an index, the researcher gives up the ability to freely peruse the entire body of legal information without curation, instead deferring to the choices of the indexer. Therefore, the researcher sees the law through the eyes of the indexer. Yet, because the quantity of legal information is so great and the researcher's time is so valuable, it makes sense to trade this freedom for ease of access to potentially relevant information.

 ¶26 Research tools that rely on algorithms are markedly different from other tools in that they tend to conceal the research process itself. Take, for instance, AI case briefing software such as Casetext's CARA or ROSS Intelligence's EVA. Far from simply validating citations found in an uploaded document, these platforms suggest citations to unsupported language. One can easily imagine a future in which a legal document is uploaded free of citations, only to have the “correct citations” automatically inserted, to say nothing of a time when complex briefs will be created from previously uploaded material.

 ¶27 Yet this “backloading” of the research process could have dire consequences for legal innovation. This is because legal research is not only a prerequisite for creative lawyering but is itself a component of the lawyer's creative process. It is, after all, in the midst of the research process that the researcher engages in analogy and strategy, creating new associations from seemingly dissimilar notions and planning new applications for existing concepts. In this way, legal research is more akin to writing and oral advocacy than document review. Thus, backloading and outsourcing—and thus concealing—the research process imprisons the researcher within the limits of his or her own understanding.

89. See Robert Ambrogi, Casetext Just Made Legal Research a Whole Lot Smarter, LAW SITES (May 1, 2018), https://www.lawsitesblog.com/2018/05/casetext-just-made-legal-research-a-whole-lot-smarter.html [https://perma.cc/NAJ9-WGZP] (“[P]reviously, for CARA to work, the uploaded document needed to contain case citations. That was because its algorithm compared the cases in the uploaded document to the cases and articles in the Casetext database, looking for other cases that were usually cited alongside those cases. [N]ow, CARA works with any kind of legal document, regardless of whether it contains citations. You can, for example, upload a complaint that contains no citations and use CARA to find cases relevant to the facts and issues.”); see also ROSS Intelligence, EVA: Find Similar Language, YouTube (Feb. 9, 2018), https://www.youtube.com/watch?v=28GYfwypvyw [https://perma.cc/2GP3-T4EY].
90. See Delgado & Stefancic, supra note 60, at 320, ¶ 33 (“[A] searcher who begins with an index category in a legal digest or practice guide is likely at least to glance at adjacent categories. This browsing encourages the development of analogical or metaphorical reasoning and legal arguments that stretch existing theories to cover new factual settings.”); see also id. at 328, ¶ 51 (“To break loose from hidebound patterns requires more than vast quantities of material linked by some common fact. It requires a conceptual advance that sees old material in a new light.”).
91. See Robert C. Berring, Chaos, Cyberspace and Tradition: Legal Information Transmogrified, 12 BERKELEY TECH. L.J. 189, 209–10 (1997) (“The danger . . . is that each step in the research process that is carried out automatically by the front end system, is a step taken away from the purview of the researcher. Each decision that is built into the system makes the human who is doing the search one level further removed from the process. If each user of information was aware of these steps, if each user understood what was being done for her and could monitor results with a skeptical eye, the danger would not be so great. But the whole point of these systems is to work automatically. The whole point is to create an environment where the searcher does not have to know about those steps.
¶28 More troubling, perhaps, is the false impression these platforms and applications give researchers that they are being presented with the “right” answers. As another example, Westsearch Plus, a feature of WestlawEdge that provides the researcher with “predictive research suggestions,” encapsulates the search into a preformulated question and presents a corresponding set of relatively precise answers from a limited number of cases.\textsuperscript{92} Such results omit those cases left unchosen by most users, including those in which courts may have taken a heterodox approach or expressed doubt about the current rule.

¶29 Yet law is not a science with clear-cut answers. While \textit{stare decisis} might lend predictability to the law, a precedent is not a mathematical formula that predetermines a particular result. Law is dynamic, applying differently to novel factual scenarios. Furthermore, to change and refine the law, old precedents must be challenged with new approaches. Yet for lawyers and judges to accomplish this, they must have the freedom and proper means to do so. Therefore, research tools that excessively foreclose on possibilities or give the impression that the possibilities are much more limited than they are will surely make the path of the law more stagnant.\textsuperscript{93}

**Entrenching**

“[Algorithms] automate the status quo.”

—Cathy O’Neil\textsuperscript{94}

¶30 Likewise, the source that most users choose is not necessarily the best source, although it may well best serve society’s dominant interests. As O’Neil explains, “to build an algorithm you need two things: data (what happened in the past) and a definition of success.”\textsuperscript{95} In the case of the algorithms found in legal research tools, success consists of the retrieval of relevant documents as defined by the programmers of those algorithms. The data is provided by the past users of those tools.

¶31 In a 2017 article, Susan Nevelow Mart compared the top 10 results of 50 searches across six legal databases.\textsuperscript{96} She found that the results differed dramatically from database to database, demonstrating that what a researcher finds in the process of searching depends heavily on who builds the search algorithm and what

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\textsuperscript{93}See Delgado & Stefancic, supra note 60, at 322, ¶ 36 (“Computerized research may occasionally help an attorney locate one case, different in some minute respect from the others, where the judge ruled favorably. But the attorney who fails to find such a case can do little but send the client away with the words, ‘Sorry, the law is not in our favor.’”). Although one need not subscribe to the CLS concept of indeterminacy to find this phenomenon problematic, those who do should be especially apprehensive about the way AI-powered legal research threatens to reify deterministic notions of law. For an introduction to indeterminacy, see David Kairys, \textit{Legal Reasoning, in The Politics of Law: A Progressive Critique} 11 (David Kairys ed., 1982).


\textsuperscript{95}Id.

\textsuperscript{96}Nevelow Mart, supra note 83.
choices they make in the process.\textsuperscript{97} Thus, the biases and assumptions of the programmers are imputed to the search algorithms they write.\textsuperscript{98} This is especially troubling because the programmers of algorithms typically come from homogenous groups of people with particular incentives, typically corporate profit.\textsuperscript{99}

\textsuperscript{32} Frustratingly, the design and inner workings of the algorithms that underlie commercial legal databases are trade secrets.\textsuperscript{100} They are rendered, therefore, invisible, or “black-boxed.”\textsuperscript{101} Thus researchers are left in the dark, only able to wonder—if they wonder at all—about the basis on which information has been included or excluded, how predictive algorithms are used to anticipate use, how relevance is evaluated, and so on.\textsuperscript{102} What is worse, the “the black box of the algorithm’s work” may serve to further create a sense in researchers that the results are objective.\textsuperscript{103}

\textsuperscript{33} But “algorithms are created by humans.”\textsuperscript{104} So too is the data that algorithms rely on to “improve” retrieval and choose which results to display. As early as 2007, Delgado and Stefancic complained of what they called the “popularity contest approach,” that is, the arrangement of Internet material according to the frequency of use.\textsuperscript{105} They point out that such an approach “builds in a structural bias in favor of commonplace items that have found wide use” and allows “[h]eretical or new ideas that are just beginning to be noticed [to] easily escape the attention of a busy searcher.”\textsuperscript{106} In a 2011 assessment of WestlawNext, Ronald E. Wheeler comments on the same phenomenon, noting that the database’s use of crowdsourcing, that is, the “[ranking of] items higher or lower in the result list” based on the behavior of past users, may become problematic “when researchers are looking to find the stone left unturned, the less popular result, [or] the more esoteric tidbit of legal information.”\textsuperscript{107} Contemplating the greater implications, Wheeler speculates that

\begin{quote}

[i]f legal researchers are unable to find unpopular or less used tidbits of legal information, this has the potential to change the law. If the applicable legal precedent is unfindable and therefore unusable, hasn’t the law been effectively changed? Existing but less popular legal precedents could effectively become invisible. Rarely used but valid laws, doctrines, or arguments might fade into nonexistence. The unfindable could practically cease to exist. . . . These obscure ideas might never be uncovered, examined, and expounded upon if irretrievable. The result would be to limit the possibilities of legal writing, to limit the reach of creative thinking about the law, to narrow the range of alternative legal perceptions, to close the door to the unknown. Alternative views of the law or of the possibilities of the law would never be exposed.\textsuperscript{108}
\end{quote}

\textsuperscript{97} Susan Nevelow Mart, \textit{Every Algorithm has a POV}, AALL \textsc{Spectrum}, Sept./Oct. 2017, at 40, 41.
\textsuperscript{98} Nevelow Mart, \textit{supra} note 83, at 388, ¶ 2.
\textsuperscript{99} See O’Neill, \textit{supra} note 85.
\textsuperscript{100} Nevelow Mart, \textit{supra} note 83, at 389, ¶ 3.
\textsuperscript{101} \textit{Id.} at 391, ¶ 8, n.19.
\textsuperscript{102} \textit{Id.} at 391, ¶ 8.
\textsuperscript{103} \textit{Id.}
\textsuperscript{104} \textit{Id.} at 388, ¶ 1.
\textsuperscript{105} Delgado & Stefancic, \textit{supra} note 60, at 325, ¶ 40.
\textsuperscript{106} \textit{Id.}
\textsuperscript{108} \textit{Id.} at 368–69, ¶ 29.
Joining in this chorus, Stump remarks that “crowdsourcing . . . likely inhibits law reform” because, “like the West Topic and Key Number system, [it] is an agent of homogenization for research outcomes.”

¶34 Debate over whether to trust the “wisdom of the crowd” is hardly new and probably dates to the 1841 publication of Charles Mackay’s Extraordinary Popular Delusions and the Madness of Crowds. It very well may be that the crowd is reliable in collectively reaching an accurate answer to purely factual questions. In political and moral matters, however, which law certainly is in large part, what can we expect but for the crowd to imprint its biases on the historical data it creates? This is especially true where the crowd is self-selecting. After all, the primary users—and most certainly the earliest users—of commercial legal research tools are those who can afford to license them.

¶35 As several prominent thinkers have shown, the perpetuation of racial, gender, and class biases is a matter of grave concern in the use of AI technologies. Although it is true that embedded biases have long blighted legal research tools, older tools of legal research such as indexes and keyword searches did not inspire the blind faith that AI does, nor did they invite users to cede so much control over the research process. While we cannot know precisely how these and other biases will infect legal research powered by AI, thus becoming further entrenched in our legal system, we can be confident that they will.

Forging a CLR Framework

¶36 The framework that follows is adapted from Stump’s synthesis. Here, however, the methods are modified to address the dangers of AI discussed above. This framework is intended to obstruct the ability of emerging technologies to close the legal imagination and transform the law into a monolith. Stump has rightly declined to create a definitive framework that unifies CLR methods, for “critical research, as an inherently creative process, by its very nature resists a formulaic application.” Thus, this framework too is a loose one, more a collection of sug-

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109. Stump, supra note 2, at 611.

110. This is what the British statistician Francis Galton came to believe after observing 800 random individuals participate in a contest to guess the weight of an ox at a county fair, only to find that the median guess was accurate within 1 percent of the ox’s true weight. See Francis Galton, Vox Populi, 75 Nature 450 (1949). For a contemporary iteration of this view, see James Surowiecki, The Wisdom of Crowds: Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies, Societies and Nations (2004).

111. At an AALL 2019 session, the author was assured by the representative of one major database that the results that the algorithms underlying the representative’s platform retrieved were not based on popularity, as each organization subscribing to that database is counted as one user, regardless of the number of individual users within that organization. This, the representative asserted, ensures that the sample would be diverse. When the author inquired how the creators of the platform had accounted for the fact the majority of subscribing organizations were large law firms and government organizations—as opposed to solo practitioners, small firms, and legal aid organizations—the representative replied that this was “not the kind of diversity [he was] talking about”!


113. Stump, supra note 2, at 618.
gestions for how legal researchers—and those who train them—might engage with emerging technologies and guard against their pitfalls. Accordingly, this framework represents a starting point, a prayer that others will perceive the same dangers and take up the mantle of engaging in algorithmic activism, creating transgressive bibliographies, practicing unplugged brainstorming, teaching CLR methods to students, and developing new strategies.

Decolonizing the Algorithm

¶37 Stump writes of “internaliz[ing] the central, critical analysis of the research process,”114 that is, obtaining a deep understanding of the insights and methods discussed in the first section of this article. While legal researchers would still do well to consider the problematic tendencies of information classification systems and the hegemonization of the legal publishing industry, the focus of self-identified “research crits” must now shift to “demanding accountability from our algorithmic overlords”115 and seeking to gain a deep understanding of how AI will serve the dominant interests of society. This can be accomplished only through study, action, and pedagogy.

¶38 Law librarians must aspire to comprehend the algorithm. While this does not require us to become programmers, it does mean that we must make efforts to understand what the programmers of algorithms do and how algorithms work. Good places to start are Nevelow Mart’s articles The Algorithm as a Human Artifact: Implications for Legal [Re]search and Every Algorithm Has a POV, both previously cited, as well as Cathy O’Neil’s book Weapons of Math Destruction (2016). As new AI-powered legal research products enter the market, law librarians should publish more studies to keep the profession abreast of new developments and engage in critical dialogue about the impact these products might have on the future of the legal research process.

¶39 We must also put pressure on vendors to “be much more transparent about the biases in their algorithms.”116 While individual law librarians can certainly do this through personal contact with vendors, the American Association of Law Libraries (AALL) should make the demand for algorithmic transparency one of its major objectives moving forward. In June 2018, AALL retained an attorney to write a letter requesting that LexisNexis cease its anticompetitive licensing practices.117 It would be encouraging if a similar action was taken to promote algorithmic transparency. Another collective measure that law librarians might take is the development of a standard algorithmic audit form that proprietors of commercial research platforms could use to disclose potential biases to concerned researchers.

¶40 Of course, more innovative vendors might see the inherent value in transparency and introduce functions that allow researchers to see and control the algorithms that underlie commercial platforms. For instance, Fastcase now allows users to customize the relevance algorithm on a sliding scale of importance, ranging from

114. Id.
115. O’Neil, supra note 94.
1 through 10 across two categories and eight subcategories. The first category is “Documents Properties” with the subcategories of “Responsiveness” (“[d]ocuments that have the search terms close together are preferred”), “Importance” (“[c]ases that are cited many times are preferred”), “Authority” (“[c]ases from sources of higher authority are preferred”), and “Date” (“[m]ore recent cases are preferred”). The second category is “Documents Usage” with the subcategories of “Frequently Read” (“[f]avors documents that are read more often by Fastcase users”), “Frequently Favorited” (“[f]avors documents that are saved more often by Fastcase users”), “Frequently Downloaded” (“[f]avors documents that are downloaded more often by Fastcase users”), and “Frequently Emailed” (“[f]avors documents that are emailed more often by Fastcase users”). Fastcase should be lauded for this feature, as it not only puts control back in the hands of the researcher but provides an excellent tool for showing legal research students how algorithmic rules control search results.

Finally, we should use our pedagogy to instill in our students a healthy dose of skepticism about claims of objectivity and neutrality. This is especially true in the context of technology, where these claims are made behind a veil of complexity and widespread arithmophobia. It no longer suffices to teach our students simply how to navigate a platform’s interface. Instead, we must encourage students to learn about what takes place inside the black box, emphasizing that all technologies are created by human beings with their own biases and that there is a power differential between the entities that create and shape these technologies and the individuals who use and rely on them. While it is true that academic law librarians, as a general matter, never have as much classroom time with students as they would like, these lessons have become too important to omit.

Looking Beyond

Stump advises that researchers should “engage in traditional concept-based legal research,” such as “the usage of a wide range of secondary sources” and that “[t]o truly search outside the system box, researchers also may seek out cross- and multidisciplinary materials.” As discussed in the previous section, the tendency of AI-powered legal research tools to conceal the research process stifles analogical reasoning and, thus, creativity. What is needed, then, is more exposure to secondary legal and nonlegal sources.

Law librarians can best assist in this endeavor by creating, publishing, and disseminating new transgressive and archeological bibliographies that, approaching a particular legal issue, juxtapose a wide range of cases, statutes, regulations, and legislative history materials with secondary sources, theoretical scholarship (both legal and nonlegal), news articles (both historical and contemporary), literary and

119. Id.
120. Id.
122. Stump, supra note 2, at 619–21.
artistic works, editorials and opinion pieces, first-person narratives, and even social media posts. By arranging these sources chronologically rather than hierarchically, these living timelines could serve to contextualize the law, demonstrate that law is a cultural product, and, most important, stir creativity in the researcher.

Unplugged Brainstorming

§44 Taking his cue from Delgado and Stefancic, Stump writes that “[a]fter . . . resource-gathering methods have been exhausted, an attorney may engage in (more purely) analytical strategies. Perhaps most importantly, the critical researcher should, at this point, consider unplugging.” Delgado and Stefancic conceptualize unplugged brainstorming as an exercise in which the computer is shut down and the legal researcher contemplates “what an ideal legal world would look like from the client’s perspective,” thus allowing for “the free association of ideas, policies, and social needs.”

§45 In today’s fast-paced world, law students, attorneys, and even legal scholars are often looking for quick answers to their queries. Indeed, this is what makes AI-powered legal research tools so appealing. However, quality, innovation, and creativity are often sacrificed to haste. Thinking, not briefing software, should be the bridge from research to writing. Accordingly, students—our future practitioners and scholars—must be taught to internalize and own, not externalize and outsource, the research process: taking the time to think carefully about the information they are accessing and stepping away from the research platform to consider the implications of what they have found.

§46 One component of unplugged brainstorming is collaborating with other attorneys as well as stakeholders in the case at hand. While law faculty members have long used colloquia to test out new ideas and obtain feedback from their peers, the pace and nature of practice is such that practitioners have never formalized such a process. Doing so, however, especially in and across public interest organizations, might serve to further foster creativity.

Conclusion

§47 It is the author’s hope that nothing he has written here marks him as a Luddite. To the extent that AI can free researchers from repetitive processes that take time away from clients and patrons, expand access to justice, and even aid in finding the perfect case to support an argument, law librarians should welcome the changes it brings. However, law librarians also have an obligation to interrogate claims of objectivity and neutrality, to promote transparency, and to do their part to ensure that our legal system becomes more, not less, equitable. To do so—and to answer this article’s titular question—we will all need to practice and teach CLR in the age of AI.

123. Id. at 621.
124. Delgado & Stefancic, supra note 60, at 328, ¶ 50.