

Legal Information Revolution!
A Commentary on *Computer Uses in
Law Offices*

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INTRODUCTION

Imagine “a device that can be interrogated via the computer by means of a keyboard which may be part of a typewriter or may be attached to a cathode ray tube, which is a display device resembling a television set.”¹ In 1970, computers and their uses were completely novel to the legal community, as Stephen E. Furth’s descriptions show in his article, *Computer Uses in Law Offices*. Lexis was introduced just two years after Furth’s article, and one of its early prototypes actually used Sony color television sets as monitors.²

Furth ends his article by noting that lawyers do not have the time or motivation to learn the new technology, and he encourages law schools to close the communication gap between lawyers and technicians by educating and training students on legal technologies.³

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¹ Stephen E. Furth, *Computer Uses in the Law Office*, 49 OR. L. REV. 217, 219 (1970).

² William G. Harrington, *A Brief History of Computer-Assisted Legal Research*, 77 LAW LIBR. J. 543, 551 (1985).

³ Furth, *supra* note 1, at 223.

While lawyers arguably have been slow to adopt new technology, they have been ahead of other fields in the area of computer-assisted legal research. The driving force behind this success is probably the fierce rivalry between the two main vendors of online legal information—Lexis and Westlaw—even though law schools had programs to introduce the systems to students.

This Retrospective discusses the evolution of computer-assisted legal research following the publication of Furth's article in 1970. It explores how the digital revolution has impacted legal education and the profession as a whole, and it concludes by discussing how the next generation of lawyers can be trained in the digital world.

I

COMPUTER-ASSISTED LEGAL RESEARCH EVOLUTION

As noted in Furth's article, lawyers and technologists were already experimenting with computerized legal research prior to 1970. In 1963, the United States Air Force created a database containing the full text of some Supreme Court decisions,⁴ and Professor John Harty at the University of Pittsburgh created an electronic library of public health statutes.⁵ Professor Harty's project in particular caught the attention of the Ohio State Bar Association, which formed a committee (the Ohio group) to consider creating a "nonindexed, full-text, on-line, interactive, computer-assisted legal research service."⁶ The Ohio group contracted with Data Corporation to build a system called Ohio Bar Automated Research (OBAR).⁷ While OBAR was starting to show promise, building the system required far more money than the Ohio State Bar Association could raise.⁸ Then, in 1969, Data Corporation was acquired by Mead Corporation, a paper company.⁹ Mead determined that computer-assisted legal research was potentially profitable enough to expend tens of millions of dollars to redevelop OBAR into a nationwide system.¹⁰ By 1973, Mead introduced the legal world to Lexis. The system contained the U.S.

⁴ Lynn Foster & Bruce Kennedy, *Technological Developments in Legal Research*, 2 J. APP. PRAC. & PROCESS 275, 279 (2000).

⁵ Harrington, *supra* note 2, at 544.

⁶ *Id.* at 545.

⁷ *Id.* at 547.

⁸ *Id.* at 549–50.

⁹ *Id.* at 550.

¹⁰ *Id.*

Code, federal case law, tax regulations, and some state materials.¹¹ The terminal was similar to Furth's description of a computer: it was a monitor that looked like a television set with a keyboard that resembled a typewriter. Because lawyers had "no idea how to type, much less how to control a computer," the keyboard had function keys, printed with "legends appropriate to the legal research functions they performed."¹²

Meanwhile, West Publishing Company dominated the legal publishing market. For nearly one hundred years, West's National Reporter System standardized American jurisprudence, creating unified case reporting and indexing.¹³ Its authority and accuracy were undisputed and unchallenged. Cases that were not included in the system were simply considered "unpublished."¹⁴ The other invaluable tool for legal research was the much smaller *Shepard's Citations*, which tracked citations so lawyers could determine a case's validity. As Robert Berring explains, "at its apex, the controlled paper universe of legal information consisted of a set of West reporters and a set of *Shepard's Citations*."¹⁵ These books, like the firm libraries that housed them, were just part of overhead, an assumed cost of practicing law.¹⁶ Lexis, which had no paper roots, was about to change everything.

Lexis was quickly adopted by law firms, government agencies, and universities. Although West Publishing introduced Westlaw two years after Lexis, it took much longer for Westlaw to truly catch up. In fact, in the early days "the consensus of opinion was that the Lexis system was about to drive WESTLAW out of the market and into oblivion."¹⁷ Why? Westlaw made the poor decision to include just case headnotes in its system—not the full text of the cases.

It seems obvious today that full text searching is the major reason to use computer-assisted legal research. However, to fully understand the situation in the 1970s, it is useful to return to Furth's article. As Furth explained, there would be two basic techniques to organize and

¹¹ *Id.* at 553.

¹² *Id.* at 552, 552 n.4.

¹³ Robert Berring, *Chaos, Cyberspace and Tradition: Legal Information Transmogrified*, 12 BERKELEY TECH. L.J. 189, 192 (1997).

¹⁴ *Id.*

¹⁵ *Id.* at 195.

¹⁶ *Id.* at 196.

¹⁷ Robert J. Munro et al., *LEXIS vs. WESTLAW: An Analysis of Automated Education*, 71 LAW LIBR. J. 471, 475 (1978).

access legal literature: (1) the “mechanization of conventional indexing” and (2) the “full text’ system.”¹⁸ His matter of fact comments concealed a raging controversy. The Ohio group’s proposal of a full-text, online, interactive system was radical and unleashed a great deal of furor. The system’s concept was a direct affront to the industry standard digests. Librarians argued that a system which searched the entire text of legal materials could not produce sufficiently specific results and would be prohibitively expensive.¹⁹ Lexis followed the Ohio group’s revolutionary idea, and Westlaw took a more conservative, conventional approach.

Westlaw quickly fixed its mistake. By 1978, it was full text; in 1980, West redesigned Westlaw, upgrading its speed and reliability, adding new databases, and licensing *Shepard’s Citations*.²⁰ The next year, Lexis boasted, “more Shepard’s than is offered by any other computer-assisted research service.”²¹ Westlaw countered that its updates were “on-line four to six weeks sooner than any other computerized case history service.”²² A fierce competition was on.

The rivalry between the two companies cannot be overstated. Thousands of databases were added as the companies tried to keep up with each other. The technology advanced rapidly as each company tried to make its system more convenient and user-friendly. In fact, the advancements kept time with the fast-paced information and communications technology developments. The dial-up terminals became programs for personal computers. As soon as Internet access became available, an Internet address replaced the dial-up number. The programs began to incorporate HTML, and later web browser interfaces were developed. Searching also became more intuitive, evolving from Boolean, to natural language, to the current artificial intelligence algorithms.

While Westlaw and Lexis expanded and improved, other publishers became involved in computer-assisted legal research. In the 1980s, some vendors began producing CD-ROMs containing the

¹⁸ Furth, *supra* note 1, at 220.

¹⁹ Harrington, *supra* note 2, at 546. According to William Harrington, who was part of the Ohio group, “Many law librarians were appalled to learn that the new concept of computer-assisted research would operate free of their dearly beloved, elaborate structures of indexes and digests. Some of them were intemperate in their scorn.” *Id.*

²⁰ See Deborah E. Shrager, *Saying Farewell to a Classic: Goodbye to Westlaw.com*, AALL SPECTRUM, Dec. 2014, at 27, 28.

²¹ *Id.*

²² *Id.* at 28–29.

primary authority for a particular jurisdiction.²³ Because legal research is a lucrative market, giant publishers took interest in the area. Eventually, Lexis and Westlaw were acquired by much larger companies. Reed Elsevier PLC purchased Lexis in 1994, and Thomson Publishing acquired West Publishing in 1996.²⁴ That year, Reed Elsevier further shook up legal publishing by purchasing the parent company of *Shepard's*.²⁵ These changes were huge; one commentator declared, “The tectonic plates of legal information are shifting.”²⁶

An even bigger change was brewing. During the mid-1990s, the World Wide Web was starting to expand. The web made it possible to easily and instantly publish and access information on the Internet. Courts could post their opinions to their websites the day of the decision. Government agencies could provide access to material online that previously required a trip to the agencies’ offices. The full statutory code could be available on a state legislature’s website. Sophisticated search engines like Google made finding legal information seem easy.

Lexis, Westlaw, and most other legal publishers moved to the web, too. Unlike the government websites, they still required hefty subscription fees. Whether free or not, the world of legal information almost completely transformed. Computer-assisted legal research became simply legal research.²⁷

II

THE IMPACT (FALLOUT?) ON LEGAL EDUCATION AND THE PROFESSION

The transformation of legal research has had a rather profound effect on legal education and the practice of law. The most obvious effect is that computer-assisted legal research has made some aspects of research much easier and faster.²⁸ Previously, consulting indexes,

²³ See Foster & Kennedy, *supra* note 4, at 281.

²⁴ See Berring, *supra* note 13, at 198.

²⁵ *Id.* at 198–99.

²⁶ *Id.* at 199.

²⁷ See Shrager, *supra* note 20, at 31.

²⁸ See Foster & Kennedy, *supra* note 4, at 282 (“Where the attorney once walked from digest to reporter volume to reporter volume to Shepard’s, and carried on research surrounded by a pile of books, she can now sit at the computer and gain access to databases larger than most law libraries.”).

pulling volumes off the shelf, and doing anything involving *Shepard's* took hours of tedious effort, and yet it required some level of expertise. It was the perfect job for law clerks and entry-level associates. Computer-assisted legal research accomplished these tasks in minutes, and law clerks and new associates became much less valuable (along with the library staff that re-shelved the books). Some speculate that e-discovery software now allows one lawyer to do the work that used to require 500 lawyers.²⁹ Law firms started hiring a few lateral attorneys instead of armies of new associates. The legal industry—and legal education in particular—is still undergoing a difficult period of adjustment.

Computer-assisted legal research has also changed how lawyers value legal research. In effect, it commoditized legal information in a new way.³⁰ In the past, West reporters and *Shepard's* were merely a part of overhead in a firm; “[p]aying for information was part of the fabric of practicing law.”³¹ However, with computer-assisted legal research, everything could be parceled out and charged to the client. To attract customers, Lexis and Westlaw highlighted that the systems would pay for themselves.³² Firms would either pay by time spent on the system or per transaction, and then they would pass the cost onto the client. As one commentator notes, “a firm would never charge a client for a portion of its annual subscription to the National Reporter System, but the firm might very well bill a client for its share of the cost of online information.”³³

Clients understandably balk at high bills for legal research databases, and since the recession, some have started to refuse to pay for research.³⁴ It is an interesting phenomenon because legal research is an essential part of practicing law.³⁵ Nevertheless, law schools and

²⁹ John Markoff, *Armies of Expensive Lawyers, Replaced by Cheaper Software*, N.Y. TIMES (Mar. 4, 2011), <http://www.nytimes.com/2011/03/05/science/05legal.html>.

³⁰ See Berring, *supra* note 13, at 197.

³¹ *Id.*

³² *Id.*

³³ *Id.*

³⁴ See Jean P. O'Grady, *Cost Effective Research Training Part Deux: The Past, the Present, and the Solutions*, DEWEY B STRATEGIC (June 16, 2011), <http://deweybstrategic.blogspot.com/2011/06/cost-effective-research-training-part.html>.

³⁵ Joshua Poje, *ABA TECHREPORT 2014: Legal Research*, ABA, <http://www.americanbar.org/publications/techreport/2014/legal-research.html> (last visited Jan. 30, 2015).

librarians must now train students in the dubious practice of “cost-effective legal research.”³⁶

In fact, cost-effective legal research highlights one of the most profound ways that technology has changed legal research. With print, there was one system whose authority and credibility were unchallenged.³⁷ Researchers did not have to evaluate the credibility of the source of the information. The world was small and well organized. Once students understood the system, they could focus completely on finding the right answer.

In contrast, the online world is huge and fragmented. Researchers need to constantly think about the cost, accuracy, authenticity, and reliability of their sources. Finding the right answer is just one of many concerns.³⁸

When the Ohio group first proposed a full text system, the idea was that it would “free the lawyers from the constraints of indexing. Boolean-logic searching, in effect, would allow each researcher to create an ad hoc index specific to the problem at hand.”³⁹ The problem for students and some lawyers is that they still lack the understanding of the law to create an ad hoc index specific to their issue. A further problem is that many students do not know that they lack this understanding. Deborah Shrager explains the situation perfectly:

Having spent most of their lives using search engines, students can be over-confident about their ability to conduct effective research They need regular reminders about advanced and editorial features, the multitude of resources, and the importance of using a variety of strategies to uncover the most useful information.⁴⁰

Ironically, computer-assisted legal research was meant to simplify dealing with the vast amount of ever-proliferating legal information, but in reality it has made legal research much more complicated. The easy-to-follow steps to navigate a West-enclosed world of legal information have been replaced with something akin to fragmented, haphazard searching in a world of anarchy (that may or may not be cost efficient).

³⁶ See generally O’Grady, *supra* note 34.

³⁷ See Berring, *supra* note 13, at 200.

³⁸ *Id.*; see also O’Grady, *supra* note 34.

³⁹ Harrington, *supra* note 2, at 546.

⁴⁰ Shrager, *supra* note 20, at 31.

III TRAINING THE NEXT GENERATION

How can students be prepared for searching through a morass of anarchy? Luckily, law librarians are still around to help. When Lexis first entered the market, computers were still very foreign to most people, including lawyers, librarians, and educators. Furth's careful descriptions of the uses of computers attest to the fact that people needed a great deal of help fathoming their potential. Lexis had the daunting task of showing skeptical lawyers how to actually use these strange television-typewriter-phone devices.⁴¹

Lexis embarked on an extravagant marketing ploy to promote the system: it offered law schools free usage to ensure "future generations of attorneys would embrace the new service."⁴² Westlaw followed suit and gave a free terminal and printer to subscribing law schools.⁴³ Because legal research professors were still new to computers, vendor representatives graciously offered training sessions for the students.⁴⁴

Forty years later, research instructors and librarians have vast knowledge of online legal research beyond Lexis and Westlaw. Although research programs vary, it is common to see online legal research fully integrated into the curriculum. Students rarely have to learn how to use the print version of *Shepard's* or print digests since the online equivalents are more efficient and widely available at county law libraries.

In short, research instruction simply evolved to reflect the new online research environment, but the essence of research remains the same. Students still learn how the structures within the legal system generate legal knowledge. The end goal of research remains the legal knowledge contained within the legal documents; only the system of publication has changed. This new publication system is far more dynamic. It has broken up and expanded, and the ways that we navigate the new world are more refined and creative.

Certainly, first-year law students would probably prefer learning a rigid series of research steps with clearer beginning and ending points. However, once students move into advanced legal research, the possibilities of this new world of digitized information become

⁴¹ See Berring, *supra* note 13, at 196.

⁴² *Id.* at 196 n.31 (citation omitted) (internal quotation marks omitted).

⁴³ See Shrager, *supra* note 20, at 30.

⁴⁴ Ian Gallacher, *Forty-Two: The Hitchhiker's Guide to Teaching Legal Research to the Google Generation*, 39 AKRON L. REV. 151, 176 (2006).

fascinating. Students, scholars, and lawyers have easy access to information going far beyond the law. Law librarians show students how to navigate all kinds of wonderful sources that even ten years ago we had no way to access.

CONCLUSION

Since the publication of Furth's article in 1970, computers have had a profound impact on how lawyers accomplish the essential task of legal research. While Furth clearly understood and explained how computers could benefit lawyers, the straightforward article belied the stirring revolution. First, the intense competition between Lexis and Westlaw led to incredibly technologically sophisticated systems. Later, the web dramatically opened the world of legal information to everyone. A period of adjustment is still taking place as we try to process the full impact of computers on the legal profession. However, as the world of legal information proliferates and research tools become increasingly sophisticated, law librarians continue to track information developments and interface between the overwhelmed student and the many resources available.⁴⁵ It is also clear that throughout all the upheaval, legal information cannot be translated into legal knowledge without the core critical thinking skills of a lawyer.

⁴⁵ See Shrager, *supra* note 20, at 31.

