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Legal Information and the Search for Cognitive Authority

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Legal Information and the Search for Cognitive Authority

Robert C. Berring

Examining legal information at the end of the twentieth century is akin to studying a moving target. Legal information is transforming from a stable universe of settled sources into a free-for-all of competing authority. By examining both the careful control of print information in the old information universe and the absence of systems of control in the new digital universe, this Essay points out the enormous challenges facing today's legal researcher. The way authority is used has changed; the way authority is defined is changing. The search for cognitive authority in legal sources in the new world of information is a major task. The generation gap in information users brings this problem into sharp relief. The Essay concludes with predictions for the future and a plea for common sense.

INTRODUCTION

When asked to reflect upon the changes in legal information that have taken place during the twentieth century, I was eager to take on the challenge. I immediately realized that any coherent assessment would have to be prospective as well as retrospective. Legal information is in the midst of great change, a change not just in formats, but in the authority structure of the materials that legal workers use. A redefinition of the most basic sort is taking place. This change is not limited to the world of legal information; it is society-wide. A number of interesting and enlightening studies have taken as their topic the movement from a print culture to an electronic culture.¹ This change is happening more quickly in legal information for a

1. There is a cornucopia of literature on the topic of the impact of the culture of the book as well. Studies of print culture are maturing just as it is dying. A true classic is ELIZABETH L. EISENSTEIN, *THE PRINTING PRESS AS AN AGENT OF CHANGE* (1979), studying the changes wrought by the advent of print. Interestingly, she found that little analysis had been devoted to this topic:

According to Steinberg: 'The history of printing is an integral part of the general history of civilization.' Unfortunately the statement is not applicable to written history as it stands although it is probably true enough of the actual course of human affairs. Far from being integrated into other works, studies dealing with the history of printing are isolated and artificially sealed off from the rest of historical literature.

Id. at 5-6 (citation omitted). While Professor Eisenstein writes concerning the field of history, much the same could be said of legal history and the study of legal cultures. For stimulating discussion of the shift from print to electronic information and its societal impact, the reader may wish to refer to SHERRY TURKLE, *LIFE ON THE SCREEN: IDENTITY IN THE AGE OF THE INTERNET* (1995), or SHERRY TURKLE, *THE SECOND SELF: COMPUTERS AND THE HUMAN SPIRIT* (1984). See also GEORGE GERBNER

variety of reasons that relate to the profession's reliance on authority and the ability of lawyers to pay well for their information.

Yet despite the centrality of legal information to the legal culture, commentators have long neglected to take a serious approach to analyzing legal information.² In part this is due to the fact that the legal information system has worked so well for so long. The cornerstone tools of legal information have been established as unquestioned oracles. They appeared too obvious to examine. For most of the twentieth century, the legal world had agreed to confer cognitive authority on a small set of resources. By "cognitive authority" I mean the act by which one confers trust upon a source.

Our lives are filled with various levels of authority, both cognitive and other. There are those we must obey, and those whom we choose to trust.³ We may do so consciously, or we may do it without thought. Each of us chooses an array of authorities to trust in a variety of ways. We may trust certain people for certain things. My sister may be 100% reliable on family matters, whereas she may be totally unreliable on questions concerning the stock market. The same issues arise in matters of information.

Often this trust, once awarded, even if originally allocated with intent, is later retained without question. We stick with our authorities and they become second nature to us. One may trust a story if read in the *New York Times*, heard on National Public Radio, or reported by Peter Jennings. We can be snobbish about the information sources of others, but we seldom critically evaluate our own. I can express exasperation at my mother's belief that if something is printed in *Reader's Digest*, it is true, but can I honestly say that I have carefully vetted the *National Journal* when I rely on it?⁴ This phenomenon is even more dramatic in the field of law.

One of the major features of legal information in the twentieth century has been the deeply rooted and stable array of cognitive authorities. Legal

& MARSHA SIEFERT, *THE INFORMATION GAP: HOW COMPUTERS AND OTHER NEW COMMUNICATION TECHNOLOGIES AFFECT THE SOCIAL DISTRIBUTION OF POWER* (1989) (examining the widespread effects of information technology).

2. Ethan Katsh has written two books that have approached this subject, but little has followed. See M. ETHAN KATSH, *THE ELECTRONIC MEDIA AND THE TRANSFORMATION OF LAW* (1989), and M. ETHAN KATSH, *LAW IN A DIGITAL WORLD* (1995). For a view from a New Zealand perspective, see RICHARD SUSSKIND, *THE FUTURE OF LAW* (1996).

3. For a classic that has spawned a literature of its own, see STANLEY MILGRAM, *OBEDIENCE TO AUTHORITY* (1983). This work addresses the obedience element of authority, and it remains one of the most powerful books that I have ever read. This Essay will sidestep the obedience issue and focus on the cognitive aspect of authority.

4. There is also a shadow factor. When one reads something, even in a blatantly unreliable source, the data still registers at some level. Legitimacy is as legitimacy does. One may read *People* magazine with skepticism, but one is still affected by the information one is processing. My favorite scene in the movie *Men in Black* occurs when the worldly Tommy Lee Jones character explains to Will Smith that the tabloid newspapers are the only reliable sources of information. See *MEN IN BLACK* (Sony Pictures Entertainment 1997).

researchers learned that certain sets of books were authoritative and reliable. If used correctly, such sources provided “the” information. One didn’t need to look behind such a publication and evaluate its worth. The process of critically judging its value had been performed long ago. The topography of legal information was so accepted, and it functioned so well, that researchers gave it little thought.

The century’s close sees this situation changing radically. The comfortable structure of cognitive authority that had been so central to legal information has fallen, and it can’t get up. Old tools are slipping from their pedestals while new ones are fighting for attention. Where once there was a settled landscape, there is now a battlefield. The change is not an organic growth, nor are learned hands like those of the American Law Institute or the American Bar Association guiding it. This change is being driven by publishers as they battle in the information marketplace for consumers. Many senior lawyers who would normally function as the gatekeepers of change are unaware that the earth is shifting under their feet, but it is. Law students and young lawyers do not see current events as revolutionary, but they are. To them it is odd that anyone ever used Shepard’s in print form or that anyone actually *used* a digest volume at all.

This disconnect creates a messy generation gap in legal information. Like all good generation gaps, there is pretty much total misunderstanding on both sides. It takes no special skill to predict that the side of youth and technology will win, but some trying years still lay ahead. The older side of the gap will not assist the younger with making the decisions on new cognitive authorities. With the older generation doing little to help, the new one will be mostly on its own.

One could reasonably assume that those in the discipline of legal research would have been hard at work on preparing us for this transition. True, the shelves groan with textbooks on how to perform legal research.⁵ Students new to law school are introduced to dizzying arrays of new tools, new terms, and, of course, that bringer of grief, *The Bluebook*.⁶ In addition, LEXIS and WESTLAW each pour substantial resources into online research training. Since most students are taught both systems, they learn how to perform research in two largely redundant systems. Further, some schools offer training in Internet research and the use of nonproprietary information systems. It is enough to give one the fantods, and it often does.

Given all this, it is wise to avoid the legal research training question completely. This Essay is about legal information. It concerns what con-

5. See, e.g., ROBERT C. BERRING & ELIZABETH A. EDINGER, FINDING THE LAW (11th ed. 1999). The economics of this are simple. Since each student in each law school takes some form of legal research course, there is a sizable population of potential text buyers. Legal research training is often a boot camp experience in which tiresome training exercises are carried out for the draftee’s own good.

6. THE BLUEBOOK: A UNIFORM SYSTEM OF CITATION (16th ed. 1996).

stitutes legal information, who controls it, and how it is changing. Most legal research courses could not possibly approach such questions, for lack of time. Furthermore, it is unlikely that the instructor has thought through the question. Very few legal scholars have even thought about these issues, and if they do, they find it almost impossible to escape the constraints of their own experience. The way one learns to perform research becomes second nature. It can be put into perspective only with the greatest difficulty. Legal research training is conducted under chaotic conditions. This Essay will take time to step back, speculate on how lawyers use legal information, and even make a few predictions.

Because the state of legal authority is so messy, this Essay will take three separate runs at the problem. In the first Part, I will show how even the most conservative part of the legal system has changed the manner in which it uses authority. First I will take a glance at the underpinnings of the legal information system in this century. Then I will consider several authoritative studies of legal information in the years before the twentieth century. I will discuss legal information, not legal research method. This glance will illuminate a world where information was controllable. Each title could be collected and long views of evolutionary changes in publication could be gained. The key concept here is that the information could be managed and kept under tight, human control.

The second section of my first run at the topic will examine a concrete example of how legal authority is used. I will compare a volume of *United States Reports* from 1899⁷ with a group of cases produced by the 1999 term of the same court included in one weekly update to the Bureau of National Affairs' *United States Law Week*.⁸ This section addresses the older side of the generation gap, demonstrating that sources are used differently today, and that the very nature of legal authority is changing.

In Part II, I explicitly discuss the collapse of cognitive authority in legal information. I will use two examples, Shepard's Citators and the National Reporter System. These authorities, once unchallengeable, are now being dismantled. The deconstruction of these authorities is taking place in real time, right now, so these examples may serve to instruct those on each side of the generation gap. Of course older users may well doubt the viability of the new sources and newer users may scoff at the position that the older sources once held, but that is the nature of change in cognitive authority. Seeing through the dust of collapsing icons is never easy, no matter what the angle of viewing.

In the final Part, I will succumb to the temptation to make predictions about what will happen in the years to come. In the midst of such change,

7. Materials in this volume of *United States Reports* are cited as 175 U.S. ____ (1899).

8. Materials in this volume of *United States Law Week* are cited as 67 U.S.L.W. ____ (U.S. June 29, 1999).

all efforts at prediction are suspect. Some deep structural issues will continue to demand attention and it is a safe bet that the areas of greatest stress will produce *some* form of change.

I

CONTROLLED INFORMATION IN THE TRADITIONAL MODE

A. Background

Looking back over the past century of legal information is a daunting task. Within the weave of legal information one can find strands of continuity, threads of a changing pattern, and of course, great patches of complete change. Perhaps the most striking theme, however, is the continuity of information sources. The key element is control of cognitive authority. In old-style information, it was possible to control legal information in every sense. Bibliographical items of legal information could be noted and processed. Information was represented in printed books: three-dimensional, tangible things. Once created, they remained fixed. Though even at the beginning of the century legal scholars complained that there was too much information, the budding legal information systems somehow managed to contain it all.⁹

As the twentieth century progressed, the National Reporter System established itself as the principal vehicle for publishing judicial decisions. I will discuss the National Reporter System in more detail in Part II. Functionally, it became the filter for cases from every jurisdiction, state and federal. It reproduced each case in a systematic, straightforward manner. While the jurisdiction of the court rendering the decision remained important for any individual matter, cases took on a fungible appearance. Official reporters aped the West system, until everything looked pretty much the same. Pull down a volume of nineteenth-century judicial reports and you will see something very different. Below I will point out some differences between Volume 175 of *United States Reports* and a reporter of today. The former is part of the last gasp of idiosyncratic judicial reporting, as standards for what a case should look like were being set. West, through the National Reporter System, created the template for case publication.

9. There was always a tension between the production of legal information (judicial reports) and its control. Simeon E. Baldwin, *The United States Law Journal of 1822*, 4 A.B.A. J. 37 (1918), quotes an earlier source:

[T]he paths of the law will be completely blocked up with the constant accumulation of these enormous masses of type and paper and binding, which they are so busily employed in placing before us to direct our steps, and to which we think it full likely some future generation, in the height of their vexation and despair, may be tempted to apply the torch of Omar, and burn their way through it.

Id. at 42 (citation omitted). While I do not know what the torch of Omar might be, it is clear that the problem of too much information was already visible to this early twentieth century commentator.

But beyond mere publication, West supplied a conceptual approach to the much knottier problem of managing the classification of legal concepts. A subject arrangement, the West Topic and Key Number system, controlled categorization. I have set out my views on the power of the Topic and Key Number System elsewhere,¹⁰ but let me note here that the West American Digest System provided the structure upon which each point in each case could fit. It set the cornerstones of cognitive authority in place.

Though judicial reports still drive the system, statutes and administrative rules have grown in importance throughout the century and sources containing them have matured. In 1926 the *United States Code* appeared in its current form.¹¹ In 1938 the *Code of Federal Regulations* and *Federal Register* were in place.¹² The *United States Code* and the *Code of Federal Regulations* do not present the same cognitive authority issues as information tools based on common law. Once the organizational structure is set in place (and each has retained the same structure since its creation), amendments and changes can be made directly to it.¹³ In the case of research in the *United States Code*, most legal researchers use a commercial variant, the *United States Code Annotated* (USCA). The USCA incorporates the headnotes of relevant cases and citations to other sources, as well as guarantees currency of information, at least by the standards of print materials. Operatively then, the private sector supplied statutory material as well.

Beyond the sources of primary legal authority, the other cognitive authority was the citator system. The Shepard's Citator system (which I will discuss in detail in Part II, below) was entrenched by the early decades of the twentieth century. This system of books and paper supplements was a sine qua non of any research process. It validated judicial authority. Shepard's Citators became part and parcel of the information system.

One of the fascinating features of these systems of information was the depth of respect they commanded. Sanctioned neither by legislative enactment nor by judicial decree, the National Reporter System, the Digest

10. See Robert C. Berring, *Collapse of the Structure of the Legal Research Universe: The Imperative of Digital Information*, 69 WASH. L. REV. 9 (1994); Robert C. Berring, *Full-Text Databases and Legal Research: Backing Into the Future*, 1 HIGH TECH. L.J. 27 (1986). Geoffrey C. Bowker and Susan Leigh Star's SORTING THINGS OUT: CLASSIFICATION AND ITS CONSEQUENCES (1999) does a marvelous job of setting out the same arguments using the classification of disease as its point of reference. See especially Chapter 1, "Classification and Large-Scale Infrastructures."

11. See the preface of volume 44 of *Statutes at Large*, 44 Stat. v (1926), where the *United States Code* is created. For an interesting, if dated, view of the creation, see Ralph H. Dwan & Ernest R. Feidler, *The Federal Statutes—Their History and Use*, 22 MINN. L. REV. 1008 (1938).

12. The *Federal Register* was created by the Federal Register Act of 1935, ch. 417, 49 Stat. 500 (1935). The *Code of Federal Regulations* was created by an amendment to that Act in 1937, ch. 369, 50 Stat. 304 (1937).

13. It is worth noting that the subject structure of 50 major topics for the *United States Code* has remained in place even as it has become outmoded. Some of the Titles, such as Title 34 (Navy), are empty and some, like Title 4 (Flag and Seal, Seat of Government and the States) are quaintly humorous.

System, annotated codes, and Shepard's citators nevertheless embedded themselves in the collective legal consciousness.¹⁴ In many cases one who used these sets was required to trace a citation back to a deeper source: an official version of the jurisdiction's cases or a set of Session Laws. But real research was done in the sets, using tools created by the private sector. The operational structure of the legal system was grounded in proprietary publications. This allowed government to abdicate its natural role as the provider and authenticator of legal information. For the practical purposes of daily research, private publishers carried the burden.

Once established, the sets sailed on unquestioned. Later generations of lawyers were not trained to critically examine such tools, but only taught how to use them. Most research courses consisted of introductions to the sets, and instruction in their use. They never seriously discussed the process by which the information was generated or why it was authoritative. Given the traditional orientation of the law, with its glacial pace of change, this may be understandable. But it still produced some oddities. As long as everyone believed that Shepard's Citators was the standard for verifying citations, and that a volume of Shepard's was infallible, it was so. There was no point in critically examining Shepard's. It was Shepard's. Much like the Pope speaking *ex cathedra*, it permitted no questioning. Until quite recently this settled map of authority was a comforting guide. The legal researcher worried about interpreting cases, not about determining whether a case was accurately reported, digested, or traced, let alone whether the system of collection and organization was sound.

This is not to imply that legal sources had gone unstudied. For one who wishes to explore the origins of legal information, there is a great deal to study. While the charge of this portion of the Essay is to survey only the past century of legal information, all things legal have deep root structures. Each development builds upon the one that came before. No encapsulation of the past century could be made without pointing towards the handholds already existing on the tree. While no single overarching history of legal publishing in the United States has yet emerged, there are a number of foundation stones to support such a work.

The most comprehensive study is also a perfect example of how information could be controlled. Morris Cohen's epic, *Bibliography of Early American Law* (BEAL),¹⁵ appeared in 1998. This gigantic enterprise took Professor Cohen over twenty years to produce. It is a bibliography that lists every American legal imprint produced from the nation's founding until 1860. BEAL is an example of the best of old-fashioned biblio-

14. This is not to say that courts did not recognize the authority of such systems. Some court rules explicitly required citation to such tools. But this only recognized the reality of the usage. The courts followed on the cognitive authority of the relevant tools; they did not create it.

15. MORRIS L. COHEN, *BIBLIOGRAPHY OF EARLY AMERICAN LAW* (1998) [hereinafter BEAL].

graphic grand enterprise. Professor Cohen wanted to collect every American legal imprint published before 1860.¹⁶ In order to assure the authenticity of his work, Professor Cohen tried to personally examine, or at the very least have someone whom he trusted examine (and send a photocopy of), each item he listed. To those of us who labor in the vineyard of bibliography, this undertaking smacks of Don Quixote at his dreamiest. Personally examining each title and personally guaranteeing accuracy is a monumental undertaking. Incredibly enough, it is now finished, though Morris is now busy compiling volumes of additions and corrections. This means that we now have a record of each imprint up to the date 1860, each entry lovingly vetted by a great scholar. BEAL stands for something more than bibliographic integrity; it represents a style of scholarship and analysis. It will serve as a fine metaphor for the old ways of creating and insuring authority. The personal reputation and honor of Professor Cohen back each entry. It provides a managed universe of information, a universe so manageable that one human could look at each element within it.

Professor Cohen's BEAL was famous long before its completion. A fine article could be written about the genesis of BEAL, but for now note that even before it was published, the period that it covered was extended. Professors Betty Taylor and Robert Munro compiled a four-volume work, *American Law Publishing, 1860-1900*,¹⁷ that presented both a bibliographic listing of American legal materials for the relevant period and a compilation of documents from this period reflecting the great changes then underway in publishing. The central motivation for the project was bibliographic. Taylor and Munro were extending Cohen's scope, bringing it up to 1900. Interestingly enough, while the bibliographers began by hand-searching library catalogs prepared by others, they ultimately did a great deal of the work using online databases, mining library catalogs throughout the world. This project was a great contribution, but it was of a different nature than BEAL. The authors did not individually examine the authenticity of the entries, but instead drew them from other sources.¹⁸ This is no criticism of the authors; indeed, it is BEAL that is the oddity.

Taylor and Munro brought the reader up to 1900. Professor Erwin Surrency in his 1990 book *A History of American Law Publishing*¹⁹ takes a broader historic sweep, encompassing the entire history of law publishing,

16. There are many rules as to what is and is not included in BEAL. It is a structure far too beautifully filigreed to be set out here. As is fitting, Professor Cohen agonized over each separate decision. See *id.* at xvii-xxiv for a useful introduction.

17. BETTY W. TAYLOR & ROBERT J. MUNRO, *AMERICAN LAW PUBLISHING, 1860-1900* (1984).

18. The first two volumes of *American Law Publishing* do not contain any of the compiled bibliography, but instead reprint a series of articles and essays on education, libraries, legal education, and the practice of law. The authors included the articles in order to provide context for the titles. Many of the reprinted essays, speeches and articles are genuine classics. But as the central thrust of the volumes is bibliographic, there is no unifying commentary.

19. ERWIN C. SURRENCY, *A HISTORY OF AMERICAN LAW PUBLISHING* (1990).

from American Independence to the time of his writing. Professor Surrency centers his analysis on the publishers of books and the journey of the books themselves. In the great tradition of Fred Hicks, Surrency sees the books themselves as the center of the enterprise.²⁰ His is a careful scholarly analysis of the development of publishers and products. His bibliography is a careful listing of a lifetime's scholarship.²¹ Ironically, Professor Surrency wrote his history just as the world was changing. The final page of his text, discussing the advent of online databases with their enhanced ability to report more decisions, elicits the following observation about computerized information: "Ignorance or indifference to what should constitute a workable legal literature will continue unabated!"²²

The fact that these authors wrote at a time when the world was being turned upside down does not take away from the power of their work. Morris Cohen, Betty Taylor, and Robert Munro provided lists of titles, a historical accounting of the kind that is central to traditional bibliographic scholarship. Munro and Taylor also gathered sources to provide context. Erwin Surrency narrated the history of legal publishing in the old style, centering on the sets and how they developed. Each of these works artfully maps a continent that was settled long ago. But the developments of the last ten years, when looked at against the background of the previous ninety, hint that perhaps we should be asking a different set of questions. Collecting information on titles may be less valuable than evaluating real-world authority.

B. *The Components of Legal Information*

1. *1899: The Finite World*

What material composed the body of legal information in 1900? The lawyer of that period was a common law lawyer. Though a growing body of treatises had appeared, most were little more than summaries of the common law.²³ Though Holmes had already written about the absurdity of the common law as a "brooding omnipresence in the sky,"²⁴ it was still cases that held law captive. The dogma of case law instruction pioneered at Harvard Law School by Christopher Columbus Langdell was being spread

20. Hicks was a scholar-librarian at Yale Law School in the early decades of this century who in his *Men and Books Famous in the Law* told the story of famous law books. See FREDERICK C. HICKS, *MEN AND BOOKS FAMOUS IN THE LAW* (1921).

21. See SURRENCY, *supra* note 19, at 341-64. This bibliography is a treasure trove of sources for the researcher.

22. *Id.* at 255.

23. See A.W.B. Simpson, *The Rise and Fall of the Legal Treatise: Legal Principles and the Forms of Legal Literature*, 48 U. CHI. L. REV. 632 (1981) for a beautiful treatment of the legal treatise and its beginnings.

24. *Southern Pac. Co. v. Jensen*, 244 U.S. 205, 222 (Holmes, J., dissenting).

around the country by Harvard graduates.²⁵ Academic law reviews were just beginning to develop as a major publication form.²⁶ The West American Digest was still settling into its role as the central repository of legal information. The American Law Institute, with its Restatements, still lay in the future.²⁷ The myth of the common law as a beautifully constructed, logically consistent, ptolemaic system of unwritten law was still very much alive.

To test the validity of the previous paragraph, I pulled down Volume 175 of *United States Reports*, the volume that begins with the cases from October 1899.²⁸ First I should note that Volume 175 fell apart in my hands. Using the copy in the faculty library at Boalt Hall Law School, looking at the books on the surrounding shelves, I discovered that many of the volumes around Volume 175 are also disintegrating. The literal crumbling of the books made me reflect upon how seldom such volumes are used (no one had touched these poor hulks in some time), and upon the myth of books lasting forever.²⁹ But after noting that we should pick up a replacement set, I set to work. Reading the volume was enlightening.

What better way to gain a perspective on what sources were available in 1900 than to see what the United States Supreme Court was citing then? What mattered to the Justices 100 years ago? Anyone who takes the time to read through one of these volumes will see that the Supreme Court of a century ago lived in a different world. It is not just that today's tangle of concurrences, dissents, and partial concurrences and partial dissents is notably absent.³⁰ The style of argumentation is different. The opinions

25. For a wonderful account, see ROBERT STEVENS, *LAW SCHOOL: LEGAL EDUCATION IN AMERICA FROM THE 1850s TO THE 1980s* (1983). Langdell's methodology was central to all this. See WILLIAM P. LAPIANA, *LOGIC AND EXPERIENCE: THE ORIGIN OF MODERN AMERICAN LEGAL EDUCATION* (1994) for a good source on Langdell and how he viewed authority.

26. See GREAT AMERICAN LAW REVIEWS 5-29 (Robert C. Berring ed., 1984) (explaining the growth and establishment of the academic law review). For a fuller account that contains its own vision of the future, see Bernard J. Hibbitts, *Last Writes? Reassessing the Law Review in the Age of Cyberspace*, 71 N.Y.U. L. REV. 615 (1996).

27. See William Draper Lewis, *History of the American Law Institute and the First Restatement of the Law*, in *RESTATEMENT IN THE COURTS* 1 (perm. ed. 1946), for a history of the Restatements that shows the American Law Institute grappling with the issue of cognitive authority.

28. I chose Volume 175 because it consists of cases decided approximately 100 years ago. The volume covers cases decided between October 1899 and January 1900.

29. When I hold a disintegrating volume in my hand I always think of folks who make much of whether electronic information will last. One of the sad failures of librarianship has been the inability to develop reasonably priced means of preserving books.

30. There are 51 decisions printed in full in the volume. There were only two concurrences, each noted with no opinion attached. While there are 13 dissents, only 3 contain any text. One consisted of half a page authored by Justice Harlan, where he cites one case. See *New Eng. R.R. v. Conroy*, 175 U.S. 323, 347 (1899) (Harlan, J., dissenting). One consisted of three Justices joining in a one-sentence dissent. See *United States v. Gleason*, 175 U.S. 588, 609 (1899) (Harlan, J., dissenting). One is a seven-page dissent written by Chief Justice Fuller, joined by two colleagues. See *The Paquete Habana*, 175 U.S. 677, 715-21 (1900) (Fuller, C.J., dissenting). This case concerns international law and is discussed later.

were direct in their discussion of issues. Even given the changes in language and the formality of the Court, the older volume reads smoothly. There is also more variation in the form in which the decisions are published. Though by 1899 judicial reports were appearing in an increasingly standard format, *United States Reports* still could be idiosyncratic. In *Cumming v. Richmond County Board of Education*,³¹ the case report begins with a thirteen-page summary of the arguments of counsel.³² The Reporter must have felt that it was important to include it. The Index is thirty pages long and functions more as a substantive summary of the cases than an index.³³ These are remnants of the days when the Reporter of Decisions was an important figure who played a pivotal role in the Court's work.³⁴ The West template had not yet been set in place.

The subject matter of the Volume 175 cases was anchored firmly in the time period in which the words were written, and yet there are eerie resemblances to matters still in play today. The first case concerns the interpretation of an Indian Treaty,³⁵ a topic we have still not settled. There was a handful of cases springing from the Court of Private Land Claims,³⁶ attempting to bring order to the messy world of land grants in New Mexico. Several cases relate to ships seized in the Spanish-American War.³⁷ Eight cases navigate the reefs of federal jurisdiction in relation to the states.³⁸ Most of these cases have long been rendered toothless, but they show that the Court has always spent a good portion of its time determin-

Only one dissent approached modern standards, and that was a 15-page dissent in one of the cases concerning prizes. See *The Pedro*, 175 U.S. 354, 368-83 (1899) (White, J., dissenting). Authored by Justice White and joined by three others, it is an exercise in old-style argumentation. The Dissent cites only seven cases (one British) and the text of the relevant Proclamation, as well as an earlier British Order on which the Proclamation is modeled. We might consider this case as a plain-meaning exercise in interpretation, but in grappling with an interpretive question, the Court sticks with primary sources. Reading the opinion one understands how much the Court stuck to primary authority.

31. 175 U.S. 528 (1899).

32. See *id.* at 528-41.

33. See Index, 175 U.S. 729, 729-59 (1899).

34. For a wonderful account of early Supreme Court reporters and their role, see Craig Joyce, *The Rise of the Supreme Court Reporter: An Institutional Perspective on the Marshall Court Ascendancy*, 83 MICH. L. REV. 1291 (1985). See also Thomas J. Young, Jr., *A Look at American Law Reporting in the Nineteenth Century*, 68 L. LIBR. J. 294 (1975) (recounting the singular nature of case publishing before the standard templates of the National Reporter System took over).

35. See *Jones v. Meehan*, 175 U.S. 1 (1899).

36. See *Chavez v. United States*, 175 U.S. 552 (1899); *United States v. Pena*, 175 U.S. 500 (1899); *Hays v. United States*, 175 U.S. 248 (1899); *Real de Dolores del Oro v. United States*, 175 U.S. 71 (1899).

37. See *The Paquete Habana*, 175 U.S. 677 (1900); *The Buena Ventura*, 175 U.S. 384 (1899); *The Guido*, 175 U.S. 382 (1899); *The Pedro*, 175 U.S. 354 (1899); *Coudert v. United States*, 175 U.S. 178 (1899).

38. See *Blackburn v. Portland Gold Mining Co.*, 175 U.S. 571 (1899); *Keokuk & Hamilton Bridge Co. v. Illinois*, 175 U.S. 626 (1899); *Arkansas Bldg. & Loan Ass'n v. Madden*, 175 U.S. 269 (1899); *Bardes v. Hawarden First Nat'l Bank*, 175 U.S. 526 (1899); *Brown v. New Jersey*, 175 U.S. 172 (1899); *Addyston Pipe & Steel Co. v. United States*, 175 U.S. 211 (1899); *Ainsa v. New Mex. & Ariz. R.R. Co.*, 175 U.S. 76 (1899); *In re Blake*, 175 U.S. 114 (1899).

ing just what its role should be. Showing that the most important social interests were always present, there is a case in which the Court finds that it is acceptable for Richmond County, Georgia, to close its only high school for "colored" children as no discrimination is shown.³⁹ There is a case about the rights of divorced women⁴⁰ and some fine, knotty contract questions.⁴¹ There are even two cases about copyright and the appropriation of one's image.⁴² Thus the range of subjects addressed is quite similar to that addressed by the same Court today. At least the similarity is enough that I can usefully compare the use of source materials.

What sources were cited? The Court relied heavily on cases. Just as the text of the cases is shorter and less convoluted, the number of cases cited is smaller. But the staple of authority was judicial reports. Cases from its own jurisprudence, cases from the various states, cases from England—all were at the center of the Court's work. Reading through the volume one finds a solid reliance on precedent.

I was interested to find that even this early, legislation was a topic. Several of the cases focus on statutes. The very first case in the volume, *Jones v. Meehan*,⁴³ presents a situation in which the Court works out the meaning of an Indian Treaty in light of a land dispute. The Court conducted a great deal of careful statutory analysis, and a careful review of the record and the evidence, but set out little in the way of research beyond the borders of the case itself. In Volume 175 it is common for the Court to print the complete text of the sections of statutes that it is examining. Cases, statutes, and parts of the trial record compose the research universe for the Court. This contrasts with the modern style of legislative history, where the Court feels free to move about sources, divining legislative intent from a welter of documents. Here the Court is doing statutory analysis, not legal history. *Ainsa v. New Mexico & Arizona Railroad Co.*⁴⁴ provides another example. Justice Gray's opinion works carefully through the sections of the relevant statute, explaining what they must mean, using the text of the act as a basis of interpretation.⁴⁵ The borders of authority are cases and the statutes, with the inclusion of material that is part of the record.

Looking at the rest of the volume, a handful of citations to secondary authority do appear in the cases. In *De La Vergne Refrigerated Machine*

39. See *Cumming v. Richmond County Bd. of Educ.*, 175 U.S. 528 (1899).

40. See *Simms v. Simms*, 175 U.S. 162 (1899).

41. See, e.g., *Bienville Water v. Mobile*, 175 U.S. 109 (1899); *Hartford Ins. Co. v. Chicago, Milwaukee & St. Paul Ry. Co.*, 175 U.S. 91 (1899); *De La Vergne Refrigerating Mach. Co. v. German Sav. Inst.*, 175 U.S. 40 (1899). The author teaches Contracts and hence sees Contracts issues everywhere, so perhaps three examples will suffice.

42. See *Bolles v. Outing Co.*, 175 U.S. 262 (1899); *Brady v. Daly*, 175 U.S. 148 (1899).

43. 175 U.S. 1 (1899).

44. 175 U.S. 76 (1899).

45. See *id.* at 86-89.

Co. v. German Savings Institution,⁴⁶ the Court turns to an English case and three commentators to disentangle a contract dispute. Three other cases make mention of commentators, even citing Blackstone.⁴⁷ But the world of authority is much more constricted. There is no citation of law reviews (hardly a surprise since they were just establishing themselves) and little citation of anything else. The only case that makes extensive use of secondary authority is the case joining two appeals, *The Paquete Habana* and *The Lola*.⁴⁸ In that case the Court was trying to parse out international law as it applied to some fishing boats seized in the Spanish-American War. Then as now, there was no centrally recognized body of sources that comprised the soul of international law. The Court knew that it was embarking on an adventure. The syllabus of the decision notes:

International law is part of our law, and must be ascertained and administered by the courts of justice of appropriate jurisdiction, as often as questions of right depending on it are duly presented for their determination. For this purpose, where there is no treaty, and no controlling executive or legislative act or judicial decision, resort must be had to the customs and usages of civilized nations; and, as evidence of these, to the works of jurists and commentators . . . not for the speculations of their authors concerning what the law ought to be, but for trustworthy evidence of what the law really is.⁴⁹

Indeed, to extract the relevant principle, the Court thrashes through a welter of international law sources. One almost senses the Court having fun roaming among French and German commentaries.

Volume 175 demonstrates that in 1899 authority issues were simpler. The cases cited judicial reports, the text of relevant statutes, and little else in the noninternational cases. Where are the other sources? The simple answer is that there were few to consult. The beginnings of the Restatements lay twenty years in the future; law reviews were still establishing themselves; and modern legal publishing was in its infancy. It is not hard to understand why the Court cited so few sources other than cases and statutes. There were far fewer sources to cite.

Two other factors may play a role. The first is that even though Holmes's *The Common Law* had appeared before Volume 175, the Legal Realist movement still lay in the future. The myth of the common law as a beautifully constructed, logically consistent, ptolemaic system of unwritten law was still strong. Langdell and his theories of legal science were in

46. 175 U.S. 40 (1899).

47. See *New Orleans v. Stempel*, 175 U.S. 309, 318 (citing 3 WILLIAM BLACKSTONE, COMMENTARIES *43).

48. *The Paquete Habana*, 175 U.S. 677 (1900).

49. *Id.* at 700.

ascendancy. One would sensibly rely on cases because that is where the law, in its scientific symmetry, lay.

The second point is that in 1899 the Brandeis Brief lay in the future. It was Louis Brandeis's use of social science and statistics in his brief in *Muller v. Oregon*⁵⁰ that legitimized evidence drawn from worlds of learning outside the law. For many years the Brandeis Brief has stood as a watershed. It proved that information beyond the scope of what had been viewed as strictly legal could be legitimate. This is to say nothing of the triumph of nonlegal authority in *Brown v. Board of Education*,⁵¹ which was more than a half a century in the future.

2. 1999: *The Infinite Universe*

Having examined a volume of cases from the 1899 Supreme Court term, the next step was contrasting the citation practices of the current Court for purposes of comparison. Rather than examining a full volume of *United States Reports*, I settled on the June 29, 1999, issue of *United States Law Week*. I randomly chose the issue that arrived on my desk through the law library routing system at Boalt Hall in the week that I began to draft this paragraph. Random checks since then have convinced me that looking at any group of 1999 Supreme Court term cases would lead to the same conclusion.

United States Law Week has supplied print copies of United States Supreme Court opinions with reliable speed for over fifty years. As a research tool it has changed in recent years, but it still performs its core function. The June 29, 1999, issue contains nine newly decided cases, typical of the end-of-the-term crush. For purposes of comparison I chose one case, *Alden v. Maine*.⁵² *Alden* is a case that treads the rocky ground between state sovereign immunity and federal legislation, here the Fair Labor Standards Act. The question at issue, whether a probation officer in Maine may sue for overtime pay under the Fair Labor Standards Act, triggers an avalanche of analysis.

Alden contains a lengthy opinion by Justice Kennedy and an erudite dissent by Justice Souter. The very fact that the decision is a 5-4 vote on an issue that has been troubling the Court for years shows a difference from the cases in Volume 175. The fact that the authorities can be read in such a different manner by such a divided Court says something about the nature of cognitive authority in 1999. We no longer live in a universe where absolutes can be discovered through judicious reading of common law precedents. While some of this difference may be attributable to politics,

50. 208 U.S. 412 (1908).

51. 347 U.S. 483 (1954).

52. 67 U.S.L.W. 4601, 119 S. Ct. 2240 (June 29, 1999).

politics have never been lacking on the Court.⁵³ No matter how one qualifies the matter it is worth contrasting the paucity of dissents in Volume 175.⁵⁴

The issue that lies at the heart of *Alden* is one that has bedeviled the Court in recent years: the nature of state sovereign immunity. Since the decision in *Seminole Tribe v. Florida*,⁵⁵ this area has become a labyrinth. The syllabus of *Alden* is a wonderful example of just how complex this all is. The summary of the issues in the abstract, which is designed to explain the text of the opinion and which is drafted by the Supreme Court Reporter of Decisions, is longer than the entirety of one of the opinions contained in Volume 175.⁵⁶ This is only a hint of what is to come.

Upon examining the text of *Alden*, one finds that unlike the cases in Volume 175, the *Alden* opinion is a wonderland of sources beyond the bounds of cases and statutes. Hundreds of cases *are* cited, but so are authorities from all corners of the information galaxy. Justice Kennedy delves into the Federalist Papers and Elliot's *Debates on the Constitution* and quickly moves to Charles Warren's *The Supreme Court In United States History* and David Currie's *The Constitution in Congress: The Federalist Period 1789-1801*.⁵⁷ Kennedy quotes Blackstone and cites *The Journal of Supreme Court History*.⁵⁸

Justice Souter's dissent is even richer in sources. Since he is swimming against the tide, his willingness to cast his authority net more widely is sensible. The opinion is so wide-ranging in its argumentation that it is hard to know what to say other than that one should read it to get a feel for it. The text cites everyone from historians such as Gordon Wood⁵⁹ and Bernard Bailyn⁶⁰ to legal scholarship such as Professor Pfander's article in

53. See EDWARD LAZARUS, *CLOSED CHAMBERS: THE FIRST EYEWITNESS ACCOUNT OF THE EPIC STRUGGLES INSIDE THE SUPREME COURT* *passim* (1998). While neither the "first" account, nor the chronicle of any epics, it demonstrates that the court is *very* politicized.

54. See *supra* note 30.

55. 517 U.S. 44 (1996).

56. See Justice Brewer's opinion in *Brown v. New Jersey*, 175 U.S. 172, 174-77 (1899). Note also that while Justice Harlan concurs in this opinion, he does so without writing separately.

57. See *Alden*, 67 U.S.L.W. at 4603-05, 119 S. Ct. at 2247-53 (citing DAVID P. CURRIE, *THE CONSTITUTION IN CONGRESS: THE FEDERALIST PERIOD, 1789-1801* (1997); JONATHAN ELLIOT, *THE DEBATES ON THE FEDERAL CONSTITUTION* (2d ed. 1854); *THE FEDERALIST* No. 39 (James Madison); CHARLES WARREN, *THE SUPREME COURT IN UNITED STATES HISTORY* (rev. ed. 1926)).

58. See *id.* at 4604, 119 S. Ct. at 2248 (quoting 1 WILLIAM BLACKSTONE, *COMMENTARIES* *234-35); *id.* at 4607, 119 S. Ct. at 2252 (citing Maeva Marcus & Natalie Wexler, *Suits Against States: Diversity of Opinion in the 1790s*, 1993 J. SUP. CT. HIST. 72).

59. See *id.* at 4619, 119 S. Ct. at 2273 (citing GORDON S. WOOD, *THE CREATION OF THE AMERICAN REPUBLIC* (1969)).

60. See *id.* (citing BERNARD BAILYN, *THE IDEOLOGICAL ORIGINS OF THE AMERICAN REVOLUTION* (1967)).

the *Northwestern Law Review*.⁶¹ One need only browse through Justice Souter's forty-three footnotes, the text of which combined is longer than the majority of the opinions in Volume 175, to see the incredible change.⁶² Indeed, there are only six footnotes attached to all of the opinions in Volume 175.⁶³ Setting aside the formidable difference in length, it is instructive just to read the text of Justice Souter's footnotes to see how far afield potential authority ranges. For one not up to trying all forty-three, refer to footnotes one through six. Footnote four uses a series of English commentators to discuss common law.⁶⁴ Footnote six ranges from Baldus Ubaldus to the very recent work of Professor Ken Pennington.⁶⁵

The difference between Volume 175 and the *Alden* case runs deeper than the length of opinions or the presence of dissents. When authority is certain, one can line up the relevant cases and find an answer. Of course, the 1899 Court had to sift through and to sort out perhaps one percent of the body of case law that today's Court must consider. But today's Court is no longer limited to the universe of judicial opinions and statutory language. Today's Court can turn to a world of sources from all corners of scholarship, to legislative history, to interpretations of legal authorities. One of my mentors, Professor Patrick Wilson of the University of California, used to say that a student of cognitive authority should start with law, because in law we actually thought we had "primary sources" that were statements of the law itself. I always thought Pat was suppressing a smile when he said it, but there can be no doubt that the saying is no longer true in practice. For the modern Supreme Court there is no final primary authority, only a kaleidoscope of sources that one can shift to provide any of a number of pictures.

My comparison between Volume 175 and *Alden* is illustrative, though it lacks the systematic intent of the project sketched by Professors Schauer

61. See *id.*, 119 S. Ct. at 2274 (quoting at length James F. Pfander, *Sovereign Immunity and the Right to Petition: Toward a First Amendment Right to Pursue Claims Against the Government*, 91 Nw. U. L. Rev. 899 (1997)).

62. Souter's first 12 footnotes contain 2,005 words; Chief Justice Fuller's entire opinion in *Bienville Water Supply Co. v. Mobile*, 175 U.S. 109, 110-14 (1899), only contains 1,791 words.

63. None of the six footnotes resemble the type of footnote that Justice Souter authors. Four are used to print in full a statutory section that is being analyzed. See *King v. Cross*, 175 U.S. 396, 401 n.1 (1899); *Bradfield v. Roberts*, 175 U.S. 291, 296 n.1 (1899); *Simms v. Simms*, 175 U.S. 162, 163 n.1 (1899); *Real de Dolores del Oro v. United States*, 175 U.S. 71, 75 n.1 (1899). One points out a change in caption. See *The New York*, 175 U.S. 187, 187 n.1 (1899). The final one is used in Justice White's dissent in *The Pedro*, and he prints out the full text of a Presidential Proclamation next to a British Order upon which it is based. See *The Pedro*, 175 U.S. 354, 379 n.1 (1899) (White, J., dissenting). The footnotes are used to reprint textual sources that might be of help to one reading the case. None represent the stroll through intellectual authority that one sees in Justice Souter's notes.

64. See *Alden*, 67 U.S.L.W. at 4618, 119 S. Ct. at 2271 n.4.

65. See *id.* at 4618-19, 119 S. Ct. at 2272 n.6.

and Wise in *Legal Positivism as Legal Information*.⁶⁶ Schauer and Wise posit that the information used by courts is dependent on what information is easily available to them. Thus as the Internet makes more and more sources available, a greater variety of information will be used. Schauer and Wise's "preliminary examination of Supreme Court citation practices" revealed a "substantial change in levels of use of nonlegal information."⁶⁷ Their findings strengthen my point. No case in 1899 used legal information as abundantly or as broadly as the 1999 Court in *Alden*. The nature of legal authority as used by the United States Supreme Court has changed. In a universe of such diversified information sources, 5-4 majorities make sense. The stability of 1899 is gone.

II

THE ENGINE OF CHANGE

A. *The Long, Stable Century*

When I graduated from law school in 1974, the legal information universe was very stable. What information belonged in this universe and how that information would be organized and verified was settled and beyond dispute. Stepping back, consider for a moment what defines an information system in the first place. An information system is built around a database of information and an organizing system that makes the database usable. In this usage the database can be one of objects (your personal collection of books), data, or anything that you choose. The organizing system allows you to retrieve the relevant part of the database. If you want to find a copy of Wallace Stegner's *Angle of Repose* in your personal library, you most likely will be able to draw on your own memory to reach for it. Your memory is your organizing system, though you may assist it by constructing an external organizing system of your own. Perhaps you will do this by grouping novels together, using an alphabetic arrangement, or creating some personal system.⁶⁸ For all but those with vast numbers of books or very poor memories, personal systems constructed almost without conscious thought work just fine.

Change the size of the database and you change the problem. If you went to the New York Public Library in search of the same book, you would need help. You would need an organizing system. There has to be a

66. Frederick Schauer & Virginia J. Wise, *Legal Positivism as Legal Information*, 82 CORNELL L. REV. 1080 (1997). They counted citations from 1950, 1960, 1970, 1980, 1990, 1991, 1992, 1993, and 1995 for their study. They continue the analysis in Frederick Schauer and Virginia J. Wise, *Nonlegal Information and the Delegalization of Law*, 29 J. LEGAL STUD. 495 (2000).

67. *Id.* at 1108.

68. See ANNE FADIMAN, *EX LIBRIS* (1997), for a charming essay on merging the book collections of a married couple. Questions of organizational principle loom large.

way to get you from your desire for *Angle of Repose* to the book itself.⁶⁹ The same contrast applies to searching for a shirt in your closet and looking for a shirt at Nordstrom. At some point a database gets too large for memory or intuition. The essential questions for a large information system are: What data do you have, and how do you make it accessible?

For most of the twentieth century the answer to the "database" question in the field of legal information was clear. The West National Reporter System was the dominant means of recording judicial decisions in a systematic, uniform manner. While the United States Supreme Court and the courts of two-thirds of the states continued to publish opinions, the National Reporter System covered everything.⁷⁰ Some states simply deemed the West volumes to be the official case reports. Others continued to require citation to their own versions, but in practice one who wanted to carry out research ended up relying on the West National Reporter System. The publishers of other sets like Shepard's Citators and American Law Reports waited for the National Reporter System version of a case to appear before proceeding.

I have contended elsewhere that for a case to become "real" it had to make it into the National Reporter System.⁷¹ A shadowland of decisions existed, real in the sense that a judge had written them to determine an issue for actual parties, but not "real," in the eyes of legal authority. Such cases might live on in a file, but they were not citable.⁷² Before the advent of online systems, getting one's hands on these cases was no easy task. Only cases that made it through the West filtering system could be real. The West Company handled this mantle with great aplomb, working closely with judges and court personnel. As a privately held corporation, West could create its own standards and it took pride in them. The motto of the Company is "Forever Associated with the Practice of Law," and it still adorns the West building in Eagan, Minnesota, to this day.

The West Company was the stable base. Alternatives did exist, but they were never central components of the legal information system. American Law Reports (ALR) continued to publish a selection of state and

69. See Robert C. Berring, *Future Librarians*, in *FUTURE LIBRARIES* 94 (R. Howard Bloch & Carla Hesse eds., 1995) (exploring this issue in some detail).

70. Just what constitutes an official set of judicial reports has itself turned out to be a problematic question. See *Oasis v. West Publ'g Co.*, 924 F. Supp. 918 (D. Minn. 1996) (discussing the matter at length).

71. See Robert Berring, *Chaos, Cyberspace and Tradition: Legal Information Transmogrified*, 12 *BERKELEY TECH. L.J.* 189, 191-95 (1997).

72. In August of 2000, Chief Judge Richard Arnold of the Eighth Circuit authored the opinion in *Anastasoff v. United States*, 223 F.3d 898 (8th. Cir. 2000). Using the Constitutional doctrine of Separation of Powers as his base, Judge Arnold posits that there can be no such thing as an uncitable case. All cases are public, published and precedential. This astounding case is very likely to cause considerable discussion and may well trigger a serious reconsideration of just what is a "real" judicial opinion.

federal cases with annotations attached, but more and more the series became a set of annotations with cases attached. Loose-leaf services covered some subject areas more deeply than the National Reporter System, and some reprinted administrative decisions and documents; but these always built on the foundation of the National Reporter System, the one set that covered everything.⁷³

West not only provided the raw information underlying the database of the legal information system, it also supplied the organizing principle for this information system through its American Digest System Topic and Key Number arrangement. In the American Digest System, West possessed a precoordinated index that covered every possible legal situation. The system, described in greater detail elsewhere, provided a stable organizing system for American law.⁷⁴ As discussed in Part I, American law has always been about cases. The Digest System organized each case that passed through the National Reporter System into a predetermined set of categories.

The Digest System, with its Topics and Key Numbers, represents an enormous intellectual investment. To organize every point of law appearing in every published case—that is, made real in the National Reporter sense—is an immense undertaking. While the Topic and Key Number System was never deemed “authoritative,” the power of the classification function that it performed was staggering. Generations of lawyers learned to conceptualize legal problems using the categories of the Topics and Key Numbers of the American Digest System. Since the seven main divisions of the Topic breakdown track the first-year courses at most law schools, the power of the scheme cuts even deeper.⁷⁵

Few people ever truly mastered the Digest System. Like many great finding systems the Digest system became staggeringly complex and soon was understandable only to its makers. This seems to be an unavoidable dilemma. As a finding system grows more sophisticated, more nuanced, and more focused in order to be comprehensive, it grows harder and harder to use. This trade-off between comprehensiveness and ease of use has never been resolved.

73. The fact that the National Reporter System has never included administrative decisions is a much overlooked fact. Administrative decisions had no outlets other than official publication, which was often slow, and quirky loose-leaf services, which by their nature were less well distributed and existed within specialties. The fact that administrative determinations are largely available online has changed this situation entirely.

74. Fritz Snyder's *The West Digest System: The Ninth Circuit and the Montana Supreme Court*, 60 MONT. L. REV. 541 (1999) is a useful piece. The footnotes provide avenues to the literature on the subject.

75. The role of the Digest categories in shaping legal thought has been explored in Richard Delgado & Jean Stefancic, *Why Do We Tell the Same Stories? Law Reform, Critical Librarianship, and the Triple Helix Dilemma*, 42 STAN. L. REV. 207 (1989). See also Robert C. Berring, *Collapse of the Structure of the Research Universe*, 69 WASH. L. REV. 9 (1994).

In the end, the fact that most lawyers never mastered the Digest System of Topics and Key Numbers probably did not matter. The average practitioner learned how to work with parts of the system. She discovered how to use the available Key Number tags in a rudimentary way, and it was fine. When I first became interested in legal research I was shocked at how few lawyers really understood the system that they used each day. The beautiful part was that they did not have to fully understand how it worked. They could just use what they needed. The categories established by the Digest system were deeply ingrained. Even if one could only stumble along, the ruts were deep and easy to follow.

A modern legal researcher might protest that I give statutes and administrative law short shrift by the above analysis. For most of the twentieth century they were second-class. Statutes have grown in importance in recent decades, and administrative law has become a major component of legal information only in the last three decades.

Statutes present a special case. Most legal researchers use annotated codes for legislative research. Annotated codes are amazing information tools. These sets organize statutes into subject groupings and keep them current, linking the sections of the statute to relevant cases and commentaries. Private-sector players invariably published annotated codes, and in some cases actually supplied the subject arrangement into which the legislative enactments were arranged. In this way, by printing and organizing the information, annotated codes met the need of both database and organizing systems. Annotated codes have survived well, even deep into the online era, because of this factor. Another important element is that today legislatures can directly amend codes. At one time legislatures passed legislation which then had to be fit into relevant subject structure. The explosion of legislation in recent years has been controlled by the fact that each jurisdiction has an existing code into which it fits new enactments. Sections of the code which have been repealed are dropped, and revised language is printed in its new form. This, plus of course the much smaller size of the corpus of legislation when compared with judicial decisions, keeps things much more manageable.

For all of the signal virtues of annotated codes, they are still dominated by case law. With their annotations they immediately hook the researcher into relevant *cases*. Indeed, the hooks that linked the statutes to relevant annotations were produced as a by-product of case production at West. Thus the point of the enterprise remained cases. As years passed and statutory law became more and more important, annotated codes came to be great research tools in their own right. But the organizing principle still hearkened back to cases.

Administrative materials are still maturing. The *Code of Federal Regulations* and the *Federal Register* came into being in the fourth decade

of the century,⁷⁶ but remained in the background until recently. The vast majority of law students never worked with them. State administrative material is only now becoming systematically published in some states. While one could argue that administrative law is the center of much legal business these days, it still lives on the periphery of legal information.

While most information systems can be explained by looking at the databases and the organizing systems upon which they are built, legal information had an additional special function: verification. When one makes judicial decisions the center of the database, one runs risks. A court may overturn one of its earlier decisions. A decision can be reversed as it climbs through the appeal process. An even more likely event is that a subsequent case will interpret an earlier case. Judicial decisions are organic. They can grow stronger or weaker over time. Some take on luster and power; others drift like abandoned barges. Because legal information was so comprehensive, and because legal researchers became such paranoid compulsives in their quest for all relevant information, the verification function was essential. How to find out if a case one read was still viable and to find out if it had waxed or waned in power became crucial.

Shepard's Citators rose to meet the legal profession's demand for verification. Creating a new style of research tool, Frank Shepard constructed a system that traced every subsequent mention of a case in other cases. Shepard's would tell you if your case had been reversed or overruled. It would also tell you if your case had been affected by subsequent decisions. Shepard's listing of *every* subsequent citation was the maraschino cherry on the chocolate sundae for obsessive researchers. Even if the subsequent citation was trivial or stupid, it was listed. Long ago I dubbed this "total blowback." Shepard's told you everything. There was a Shepard's citator for every set of case reports. There was a Shepard's for every statutory enactment and code. There was even a throng of specialized offshoots, though the heart of Shepard's lay in the case citators. These maroon volumes assumed the position of cognitive authority more blatantly than the National Reporter System or the West Digest System. Courts required that lawyers use Shepard's. It was a true industry standard. Since the story of Shepard's is told elsewhere,⁷⁷ let us here only note that Shepard's products became icons of authority. A competent researcher had to "Shepardize" his research results.

To return to 1974, the date of my graduation from law school, the universe of legal information was stable. There was an accepted database of information, a powerful organizing system, and even a method for

76. See 1 C.F.R. § 1.1 (1998) and 44 U.S.C. § 1505(a) (1998), respectively, for the authorizing legislation.

77. See Patti Ogden, *"Mastering the Lawless Science of the Law": A Story of Legal Citation Indexes*, 85 L. LIBR. J. 1 (1993).

verifying information. This ordered, and, it must be recognized, quite functional universe, has been in decay ever since. But only in the past few years has it been mortally wounded. Like a wounded elephant it will plod on for some time, but the fatal damage is done. What happened?

One might think that the advent of LEXIS and WESTLAW in the 1970's was the catalyst for such radical change, but such is not the case. LEXIS and WESTLAW built on the old foundations. They loaded the text of cases online, each word of each case. WESTLAW remained linked to its Digest System; LEXIS offered no alternative but a search engine. Each system continued to carry Shepard's as a part of its system. Interestingly each developed its own citator, Auto-Cite for LEXIS and Insta-Cite for WESTLAW, but each recognized that without Shepard's a system was incomplete. The cognitive authority of all of the old systems survived LEXIS and WESTLAW. Indeed the security that they offered made the gradual acceptance of the online systems easier.

WESTLAW and LEXIS were brave pioneers, but one cannot build new information systems out of thin air. Both followed a predictable course. Like the first iteration of many systems, WESTLAW and LEXIS tried to use new technology to accomplish the old tasks. Since everyone was deeply immersed in the existing system, they aped the functions of the old system.⁷⁸ Even the metaphors used in designing the systems—desktops, libraries, files—were all drawn from the familiar. Even so, it was hard to convince a conservative profession like law to even try the new systems. Recall that most law students arrived at law school in 1975 without ever having used a computer. For many, LEXIS and WESTLAW were the first online systems they had used. The early iterations of LEXIS and WESTLAW were exceptionally clumsy by today's standards, and the power structure of the legal profession was profoundly skeptical towards them. The online systems lurched and groped their way for almost fifteen years. While the preceding statements may approach the dyspeptic rumblings of one's antediluvian grandparent, they are made to demonstrate how difficult a task the database companies faced.

B. *The Spikes*

What brought about real change? Three spikes were driven into the heart of traditional legal information in the 1990s: a changing user environment, corporate consolidation, and the Internet. Though built on the groundwork laid throughout the 1980s and early 1990s, it was these factors

78. The first round of litigation over using the pagination of the National Reporter System in a competing product came from LEXIS. *West Publ'g Co. v. Mead Data Central, Inc.*, 799 F.2d 1219 (8th Cir. 1986) was the first in what became a cascade of cases assaulting the copyrightability of West's pagination scheme. The fight has raged ever since.

that gave the decisive push. The established tools of legal information were staggering, but these spikes of change mortally wounded them.

1. *The Changed Environment: The New Computer Age*

By the mid-1990s popular acceptance of personal computers was widespread, especially among educated groups like law students and lawyers. It was no longer necessary to train students to use a keyboard or operate a mouse. Most students arrived at law school with an understanding of search engines and Boolean searching. Their understanding of how to use these things may or may not have been more informed than their predecessors' understanding of the internal dynamics of the Digest System, but the use of personal computers was now part of these students' operating arsenal of skills.

This made for a huge change. The user base was now not only accustomed to online systems, but often preferred them. The rich literature debating whether books will survive could only exist if they were threatened.⁷⁹ Personally I doubt most new law students despise books, but they do prefer what is easiest. For one on the youthful side of the information generation gap, online information systems are easier.

As the base of users became more sophisticated, it also became more demanding. Creating systems that did what the old information model did, only faster, was no longer enough. Users were ready for new modes of searching, new ideas of how to organize research. Information vendors no longer had to convince the folks who believed that *real* research was done on a yellow pad to try to use editorial functions in a platform that was running a database. Now the target audience was comprised of folks who had always worked in an electronic environment.

When I showed the manuscript for *Finding the Law*,⁸⁰ a textbook on legal research, to my coauthor, Professor Morris Cohen, for revision in 1995 he returned it to me with words that I will always remember. "You clearly are writing this for law students that you teach. I am sure that they exist. But I do not know them and cannot possibly write for them. I am retiring. You better work on this alone."⁸¹ Professor Cohen, the scholar-bibliographer discussed in Part I, was so far on the wrong side of the information generation gap that he did not even want to make the effort to bridge it. The fact that he saw and understood this only confirmed my respect for him. Law students have fundamentally changed.

79. See "Books, Bricks & Bytes," DAEDALUS, JOURNAL OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES, Fall 1996, for a comprehensive treatment. See also FUTURE LIBRARIES, *supra* note 69.

80. ROBERT C. BERRING, FINDING THE LAW (10th. ed 1995).

81. A new edition, BERRING & EDINGER, *supra* note 5, has just appeared. Recognizing that my own ability to navigate on the progressive side of the information generation gap is limited, I secured the partnership of Elizabeth Edinger, a member of the Boalt Hall Law Library reference staff, to be my coauthor. The book will be updated via the Internet.

2. *Publisher Consolidation*

The 1990s confirmed the birth of the information age. The richest man in the world now heads an empire that does not fashion raw materials into finished products, extract resources, or trade paper. It works with information. The distribution of information has become very big business indeed. The publishing industry changed, as larger and larger players appeared. With LEXIS and WESTLAW placed in every law school, and each law student trained in using online systems and given free use of very high quality material, legal publishing was ripe for takeover. Starting in 1998, the consolidation took off. As Ken Svengalis notes, "In sharp contrast to 1977, when at least 23 legal publishers of some size and reputation were separately owned (along with scores of smaller ones), today the bulk of publishing resources are under three major corporate umbrellas: the Thomson Corporation, Reed-Elsevier, and Wolters Kluwer."⁸²

The changes in legal publishing have been fast and furious. Indeed, the players have become so hard to recognize without a program that one has been developed to keep the world informed of who owns whom.⁸³ The law book industry was once peopled by folks who had spent their lives in the business, who had worked their way up through the ranks. One does not wish to romanticize what was always a business. Legal information companies always cared about profits and bottom lines. But when the smaller, older companies played key roles, legal information was viewed as special, and it was treated as such. While many of the current managers of the remaining companies also have deep roots in the publishing business, they report to much larger entities, and often operate within much larger financial contexts. Legal information has become a commodity. Moreover, the changes in legal publishing are taking place on a global scale. None of the three major legal publishing companies is an American concern. Why does this matter to the typical legal researcher? Does anyone really care who produces the information? They should.

The most prominent casualty of publisher consolidation is the undisputed cognitive authority of the Shepard's citators. Long the Switzerland of legal research, Shepard's was an industry standard. It performed the essential function of verification. Shepardizing was a part of every research process.⁸⁴ It was an amulet: One who had Shepardized was safe from

82. Kendall F. Svengalis, *Legal Publishing on the Eve of the Millennium*, AALL SPECTRUM, July 1999, at 22.

83. The web site of Rob Richards of the University of Colorado Law Library is currently the best place to check. See *A Legal Publishers' List: Corporate Affiliations of Legal Publishers* (visited Dec. 21, 1999) <<http://www.colorado.edu/law/lib/ts/legpub.htm>>.

84. For example, one standard research text devotes a chapter to Shepard's. See J. MYRON JACOBSTEIN & ROY M. MERSKY, *FUNDAMENTALS OF LEGAL RESEARCH* 282-315 (4th ed. 1990) (titled

attack. The redefinition of Shepard's Citators, from unchallenged cognitive authority to a product to be judged on its merits, is an object lesson in the new world of legal information.

Something about the sacred status of Shepard's citators always struck me as strange. When I first entered the field of legal information I was appalled by Shepard's. Undisputed authority edged Shepard's a bit toward Lord Acton's epigram that absolute power corrupts absolutely. A set of Shepard's citators was typically six months behind in its coverage. Even in a paper universe this was slow, but when I pointed it out, people typically responded that, well, it was Shepard's. A second problem was its arcane format. Listing all of its information in tabular form, with no identifying text to help the user, seemed almost perverse. Generations of law students suffered through mental torture trying to fathom what Shepard's was telling them. Sometimes when I taught legal research to law students I would snap open a volume of Shepard's, with its long lists of numbers and alpha-numerics, let the students gasp, and then intone, "These are the enchanted books of legal research. You will learn to be sorcerers." Moronic as it sounds, there was something to it.

Shepard's also used the strangest set of treatment symbols imaginable to signal the life force of one's case. Shepard's developed a series of abbreviations that were so counterintuitive (for instance, "J" to indicate dissent) that almost no one could remember them. Further, if one did remember what a word or abbreviation stood for, one did not know what that word meant. "H," indicating "harmonized," is a good example; very few researchers could explain what a case does when it "harmonizes." These may seem like cheap shots, but understand that for a long time one could not make them. Shepard's did a thorough and quite amazing job of tracking legal information. It is just that rather than being treated like a research tool, Shepard's was treated like a paragon of authority. It was beyond reproach. If one is beyond reproach, why improve?

Shepard's has since gone through one of those seemingly irrational transformations. Today it is a much better, more user-friendly research tool than it has ever been. The format of the paper editions has improved; it is more timely; and there is a very spiffy new online version with significant enhancements. Yet despite these improvements, it is no longer an untouchable industry standard. The consolidation of the publishing industry made this inevitable.

Shepard's had been owned by the Times Mirror Corporation, a conglomerate with no other legal position. Shepard's was then jointly acquired by Reed Elsevier, parent of LEXIS, and Matthew Bender, a longtime publisher of tools for practicing lawyers. The mutual arrangement soon

"Chapter 15: Shepard's Citations"). There is no discussion of what a citator does, or how to evaluate it. It is simpler than that. Using Shepard's is a step in the research process.

blended into an outright purchase of Matthew Bender by Reed Elsevier for \$1.65 billion.⁸⁵ This meant that one of the two great database superpowers now had exclusive ownership of Switzerland.

Until that point Shepard's had always appeared on both LEXIS and WESTLAW. Competition could not occur otherwise. How could any system hold itself out as a one-stop research entity unless Shepard's was part of it? But now that Shepard's was aligned with one of the two databases what would happen? Would Reed refuse to license Shepard's to WESTLAW? Could they? There was chaos under the heavens.

WESTLAW was working on an answer. KEYCITE, a product designed to perform the functions of Shepard's as accurately and reliably, and to do more, rolled out in 1998. To be frank, many of us who are old hands at the legal research industry were surprised at the speed with which KEYCITE was accepted in the marketplace. Perhaps it is because the West Group gave it away free for the first six months. Perhaps it was because most research is done by younger attorneys and it is precisely those researchers who are least wedded to the old model. Perhaps most importantly, KEYCITE represented real changes in how citators worked. It was not just Shepard's online; it was something new. Whatever the explanation, KEYCITE use rocketed.

At that point Reed made what I view as a terrible blunder. Forcing the issue, they announced that at the end of the current contract in 2000, Shepard's would no longer appear on WESTLAW.⁸⁶ This was the final step in remaking Shepard's into a competitive product. Whereas ten years before such an announcement would have been very bad news for WESTLAW, probably dooming it, the announcement served as notice that Shepard's and KEYCITE were now competing products. At some point in the past few years, Shepard's transformed from a touchstone to a product, merely one option. Shepard's may well become a superior system, but it will have to prove that fact. Now Shepard's citators must be evaluated alongside other products on the merits of their performance, not their rarefied status as an industry standard. One need only page through a bar journal or legal newspaper to see the virulent marketing war now being fought.⁸⁷

85. See Jenna Ward, *Reed Elsevier to Acquire Matthew Bender, Shepard's*, RECORDER, Apr. 28, 1998, at 1.

86. See Barry D. Bayer, *Shepard's Citation Service Moving to LEXIS-NEXIS*, CHICAGO DAILY L. BULL., Nov. 20, 1998, at 2.

87. The August 1999 issue of *California Lawyer* serves as an example. On the inside front cover and first page is a two-page spread advertising the West Key Number system and how it can be used. Page 11 discusses the "trustworthy answers" of a Matthew Bender set (LEXIS) entitled "Authority." On pages 21-23 is a three-page advertisement describing the power of LEXIS-NEXIS, Shepard's, and other parts of the system. Page 28 is an advertisement for the LEXIS system, including Shepard's, pitched at small firms. The next full-page advertisement of any sort appears on page 60 and is in support of KEYCITE. The lead sentence "Isn't it time you joined the revolution?" is clear enough. On

When will courts recognize this shift from the centrality of Shepard's in the legal information universe? When will the language change so that one no longer talks of Shepardizing when one is using KEYCITE? The way in which these changes are happening, driven not by planning or coordination from the legal profession itself, makes the answers hard to tell. The change is seen in the research habits of the tens of thousands of law students who pour forth from American law schools each year. For them the change has already occurred, but for the institutions that guard the old way, the courts and the professoriate, it will come more slowly. If recent years have been any guide, though, the change will arrive more quickly than we anticipate.

3. *The Internet*

The Internet will bring down a second cognitive authority: the National Reporter System. Until the mid-1990s, the National Reporter System defined the legal information universe. The uniformly bound volumes of the Regional Reporters, the *Supreme Court Reporter*, the *Federal Reporter* and the *Federal Supplement*, with a changing cast of supporting characters marching across the shelves of a law library, defined legal information.⁸⁸ Official reports, loose-leaf services, newsletters, and subject-specialty sets filled in some niches, but the National Reporter System was the rock upon which it all was built.

The burgeoning power of the Internet has changed this situation. One of the reasons that the National Reporter System became so powerful is that in an era of paper publishing, it was necessary to have a physical location for an authoritative record. There had to be a thing, a three-dimensional thing, and it had to be located in a place. The Internet, and the growing movement toward electronic information, have lessened this need. While as a society we are not yet comfortable with exactly how electronic information can be archived and protected, we are moving away from the use of paper.

Vendor-neutral citation is a major part of this change. Vendor-neutral, or perhaps more accurately format-neutral, citation frees the archival location of information in judicial decisions from the physical book. There is no need for a three-dimensional item. The court assigns the citation and pagination at the time of decision.⁸⁹ As a part of the transition, most legal

page 75 is a full page describing the Focus function of Shepard's on LEXIS. The copy notes that Shepard's is available "exclusively from LEXIS." The back cover of the Monthly is a WESTLAW advertisement focused on California lawyers.

88. There have always been a set of smaller reporters included in the National Reporter System, reflecting the changes in the federal courts.

89. There are various methods of actually doing this. The best guide is AMERICAN ASSOCIATION OF LAW LIBRARIES COMMITTEE ON CITATION FORMATS, UNIVERSAL CITATION GUIDE (Tentative Draft 1998). There is a rich literature on format-neutral citation. See, e.g., Berring, *supra* note 69; James H.

sources continue to provide citations to paper sets, largely the National Reporter System, in many jurisdictions. The West Legal Group fought a long battle to prevent others from systematically embedding its page citations into their competing products. The United States Supreme Court's refusal to review the Second Circuit's opinion in *Matthew Bender & Co. v. West Publishing Co.*,⁹⁰ where the pagination scheme that is the heart of the citation system was held to be outside of copyright protection, may well signal the end of a long and winding road.

Because publishing materials on the Internet is so inexpensive, the door opened for smaller publishers to enter the market. These publishers can download data from court sites, or take the text of the decision directly from WESTLAW (removing all editorial content) and resell it. The large old sets were vulnerable not only because they were in paper, but also because they were assembled in bulk. In the old world of paper information a publisher had to produce a tool that reached the needs of a big audience. The very three-dimensional nature of the information dictated that it could only be assembled once. In addition, West Publishing was always thinking about its mantra of comprehensiveness. Think of a set like the *Federal Supplement*. Whose interest does it serve? Very few practitioners want all of the cases from all of the lower federal courts. At the very least they might make a distinction between civil and criminal cases. Quite likely they are only interested in the lower courts of one Circuit. For such users, the *Federal Supplement* is a clumsy tool. But in a paper world it served its purpose.

In the world of the Internet, publishers can tailor judicial decisions to the needs of the researcher. Even newer publishers who wish to be comprehensive in certain areas can be lighter on their feet. When Massachusetts designated LOIS as the "official" publisher of the electronic form of its judicial decisions, it proved that even a new player can score a victory. The field is filled with adolescents like LOIS who wish to be players, and volunteers, like a host of academic law libraries, that post cases in their locality because of their belief in the free distribution of information. There are also toddler systems like FINDLAW and VERSUSLAW that are

Wyman, *Freeing the Law: Case Reporter Copyright and the Universal Citation System*, 24 FLA. ST. U. L. REV. 217 (1996). For an institutional view, see American Association of Law Libraries, *The Final Report of the Task Force on Citation Formats*, 87 L. LIBR. J. 581 (1995). For updates, check the web site maintained by the American Association of Law Libraries (AALL). See *Citation Format Committee Task Report* (visited Sept. 30, 1999) <<http://www.aallnet.org/committee/citation/task.force.html>>. The AALL continues to lobby in favor of format-neutral citation systems.

90. 158 F.3d 674 (2d Cir. 1998), *cert. denied*, 119 S. Ct. 2039 (1999). For a motherlode of background and documents on this issue see *HyperLaw, Inc. Home Page* (visited Sept. 30, 1999) <<http://www.hyperlaw.com>>. This site was assembled by HyperLaw, one of the petitioners in the underlying case.

feeling their way. To quote Ray Davies of The Kinks, "It's a mixed-up, muddled-up, shook-up world."⁹¹

What is certain is that the National Reporter System is losing its cognitive authority. Once most people no longer need the comfort of knowing that legal information is somewhere in paper, the National Reporter System is doomed as a touchstone. The editorial work that goes into the American Digest System will survive. The Key Number System is already morphing into a component of KEYCITE, but the National Reporter System as the database upon which it is all based will grow dustier and dustier and more fragile, and like Volume 175 from 1899, will fall to pieces.

III

THE SERMON

Having discussed how the use of legal information has changed, and how at this moment cognitive authority sources are dying, it is time for me to speculate on what lies ahead. Prediction is dangerous. Within the next twenty years we may all have chips inserted into our brains for the direct communication of information. Or perhaps Raymond Kurzweil is right and there will be no problem because the computers will be advising us on what to do.⁹² What follows are my own thoughts. While they seem logical to me, each may be as accurate as the prediction that we would all be driving personal aircraft by 1980. Fortunately, I trust that you will little note, nor long remember, what I say here.

A. *The Definition of a Judicial Decision*

In Part I, I compared judicial decisions authored 100 years apart. I delighted in pointing out the differences. What is perhaps more telling are the similarities. For 200 years, the judicial decisions of the common law have been the heart and soul of the American legal information system. A lawyer has to hearken back to prelaw school days to even remember how odd the form of published judicial decisions really is. Sterile, hard to read, often totally unenlightening as to what they are accomplishing, judicial decisions are a singularly bizarre way of communicating important information. Indeed much of law school is spent training the nascent lawyer how to read and use them. Shouldn't this tell us something?

The typical decision contains the reasoning of a judge or judges, answering problems raised in the briefs of parties on appeal. Yet the decision may never articulate what questions were raised in the briefs. The considerable work done by appellate attorneys does not travel with the

91. THE KINKS, *Lola, on LOLA VERSUS POWERMAN AND THE MONEYGROUNDS* (Reprise Records 1970).

92. See RAY KURZWEIL, *THE AGE OF SPIRITUAL MACHINES* (1999), a fascinating, if scary, read.

case. Nor do links to the various sources the attorneys used. The record is lost and the products of discovery sink into the filing systems of a court bureaucracy. Scholarship on the meaning of the case lies elsewhere. Indeed, we do not even require that the judges clearly set out the point of law that they decide. Think how much easier the law would be to understand if each opinion had to begin with an official judicially authored summary of the case. We could even ask judges to write these in a controlled vocabulary. We could ask them to tell us precisely how what the decision is intended to affect the law. Rather than major decisions being followed by fractious debate as to what the Court intended, we could simply ask the Court to tell us.

I cannot imagine that the scenario of the previous paragraph will come to pass in my lifetime, but it serves to indicate how much change is needed. Judicial opinions do not have to be cryptic. There is a great deal of ritual associated with the courts. The black robes, the elevated benches, the arrogance tolerated from the judicial branch—all are emblems of office. But the information revolution is not going to tolerate artificially limited products much longer. In the future when, operating under a format-neutral regime, a court releases its opinion, that opinion is going to be manipulated, parsed, and repackaged by the legal information providers. New vendors will seek to reach out to new information consumers. The trope of a case reporter volume will no longer be needed, and it will not set the bounds of available information. While I have no confidence about prescribing what the new products will look like, I am certain that they will appear. The mummified and stylized prose of today's judicial opinion will become a museum piece.

The elements that greased the fall of Shepard's and the National Reporter System will also speed things up here. A generation of computer-literate researchers will see the computer monitor as the relevant platform for information. Anything that can be linked to it can be part of a judicial report. Each year when Kathleen Vanden Heuvel and I teach Advanced Legal Research at Boalt Hall Law School we perform an exercise where we ask the one hundred or so students to design a "best case" method for reporting judicial decisions. The resulting products always vary, but they look nothing like the information contained in standard National Reporter System volumes. Researchers will want more, and the vendors of information will provide it for them.

B. The Transformation of Cognitive Authority

Early nominative judicial reports lived and died by the reputations of the individuals who reported them. There was a strong idiosyncratic element to any report. Early reports of decisions did not follow a single

pattern and might include a number of features.⁹³ One relied on the authority of the author. The status of Lord Coke gave luster to his Reports. The West Publishing era replaced such individual authority with an institutional authority. Legal researchers believed in the National Reporter System as an institution. This system extended beyond judicial decisions.

One also relied on Shepard's citators as an institutional authority. Annotated codes became the central repositories of statutory research. The sets were produced in a systematic style that masked individual efforts. Is it not odd that almost no one has ever met a West editor? How could we rely so totally on Shepard's legal information when no one was monitoring how Shepard's did it, and no one even knew who worked for them? There was a studied robotic mechanism to the process. It appeared that the information was free of editorial enhancements. Since the central myth of the legal system is that we live in a society of laws, not men, this set of neutral institutions fit very well. Institutional cognitive authority worked fine.

As such institutional authority breaks down, the inevitable question looms: What will replace it? Information will fall into two divisions. One will consist of great gobs of free, or at least cheap, data. The sources of such information might be the government, or the volunteer efforts of public interest groups and motivated individuals.⁹⁴ Such sites are growing more and more sophisticated, but I cannot see them as long-term answers. The government, at the state and federal level, has never been a reliable provider of information. The impetus to publish and maintain information, and to provide quality access to it, has always been the market. As for volunteers, without eventual profit-making they will wither. The systems discussed in the footnotes have individual humans behind them, each driven to make a contribution. But what happens when they tire, or grow interested in something else? The institutions in the old system were far bigger than any one person. A steady flow of profit sustained these operations, not good intentions or political will.

The second kind of information that emerges will be value-enhanced. Someone will edit it, manipulate it, put a glitzy search engine on the front of it or do things that we are incapable of conceiving. The WESTLAW system carries with it the recognized West name, and with that name, the

93. See JOHN WILLIAM WALLACE, *THE REPORTERS, CHRONOLOGICALLY ARRANGED: WITH OCCASIONAL REMARKS UPON THEIR RESPECTIVE MERITS* (Philadelphia, T. & J.W. Johnson 3d ed. 1855), a volume devoted to evaluating the reliability of existing reporters. They could be good or bad.

94. There are hundreds of possible examples. Two of the best are the web sites of Congress and the Cornell-based Legal Information Institute (LII). See *Thomas—U.S. Congress on the Internet* (visited Sept. 30, 1999) <<http://thomas.loc.gov>>; *Welcome to the Legal Information Institute* (visited Sept. 30, 1999) <www.law.cornell.edu>. The Congressional web site represents a good, sustained effort at providing access to Congressional information. The LII site is the creation of Peter Martin and Thom Bruce, two genuine information pioneers. For an international perspective, check the impressive site *Australian Legal Information Institute* (visited Sept. 30, 1999) <<http://www.austlii.edu.au>>, the brainchild of Graham Greenleaf of the University of New South Wales in Australia.

enormous intellectual legacy of the Topic and Key Number System. These factors give the tools that cluster around WESTLAW a huge leg up, but they represent no guarantee. West will have to earn its cognitive wings all over again in the next century. LEXIS is also a mature system, with its own reputation. It is an established entity, with its own cognitive authority. The generations of law students who learned "LEXIS and WESTLAW" give it a wonderful head start, but LEXIS will also have to compete.

LEXIS and WESTLAW will compete with each other, but they will also have to compete with outsiders, and in a way they will compete against those outsiders together through the force of their indexing systems. WESTLAW has the power of human indexing via the Topic and Key Number System, which they have parlayed into KEYCITE. One of the new members of the LEXIS corporate family is the venerable Matthew Bender company, a practitioner-oriented publisher whose indexing is being built into LEXIS's new search system. This system, called Search Master, is meant to counter the Topics and Key Numbers, just as KEYCITE was designed to test Shepard's.

The big systems have important assets. But the cognitive ball is in play. As format-neutral citation takes hold, LEXIS and WESTLAW will be the natural systems to turn to. But there will be challengers big and small, and the demographics of the legal profession will draw them like bees to honey. This Essay is being written in the fall of 1999, a time of heady Internet activity. Everyone and his uncle Fud are working on start-up companies, and law is a great target. Each traditional player has a strong foundation. But the new players can offer leaner products at lower cost (LOIS) or sweat equity bulk information (VERSUSLAW). Those are the obvious choices. But there are other, more novel possibilities. One lies in the growth of a new generation of search engines.

The best example of a novel search engine is Ask Jeeves.⁹⁵ One can go to this site, ask natural-language questions, and receive answers. It works crudely, but the idea is powerful. Ask Jeeves sells its search engine to other companies such as Dell. Consider how this sort of technology could be incorporated into law. The result would be natural language answers to your questions. Since voice recognition systems will be here in the very short term, you would simply ask your computer for what you needed. For a long time, the most naïve vision was that of the person who just wanted to ask the computer a question and get the answer. That naïve vision could become a reality. The major filter of information could become the search engine. It will require less and less from the researcher while doing more and more for her. In this scenario the researcher accords

95. *Ask Jeeves!* (visited Sept. 30, 1999) <<http://www.askjeeves.com>>. This web site is worth checking out both for its strengths and weaknesses.

cognitive authority to the search system. She relies on the algorithm that drives the system to be accurate.

The legal researcher who is on the traditional side of the information generation gap may find this vision hard to credit, but the younger generation of computer users is accustomed to highly prompted front-end systems, with smooth interfaces. We trust our ATMs; why not trust our legal research system? Indeed, since most studies show that most researchers are very poor at Boolean searching in large databases, the black-box method may be better.⁹⁶ KEYCITE introduced machine sorting of not just data, but decisions, in a small way. As the profession accepts machine-based classification systems, who is to say what will follow? In a world where the fastest and easiest method becomes equated with the best method, such machine-based systems are almost sure things.

My concern is with who will evaluate such systems, and upon what criteria they will make judgments as to what the new cognitive authorities will be. Legal education, the bar, and those institutions devoted to legal reform are all headed by people from the wrong side of the information generation gap. Law librarians are fighting for their professional existence and do not have the power to impose choices, at least at this point. The federal government, with its pathetic record on information issues, holds out little hope. The current Congress is wrestling with a series of information questions, and the resulting confusion is testimony to the lack of a coherent national policy.⁹⁷ It is difficult to envision federally controlled authority validation. Various states may try some form of regulation but I have no more faith in state legislative bodies than I do in federal ones. Even if one or two states tried, the result would be a disastrous balkanization of information.

That leaves the choice of cognitive authority in the hands of the market. If the market picks the slickest, easiest-to-operate system with the glitziest front end, the integrity of the legal information system is in peril. As legal information commingles with other forms of information, there could be a significant debasing of legal information. With no informed, critical intelligence making choices, the marketeers will be in control. The thought of Rupert Murdoch controlling legal information makes my blood run cold. That would be a grim future indeed.

96. See Daniel T. Dabney, *The Curse of Thamuz: An Analysis of Full-Text Legal Document Retrieval*, 78 L. LIB. J. 5 (1986), still the final word on this. Ironically, Dabney was one of the developers of KEYCITE, a system that uses a great deal of machine processing of search information.

97. For current status of legislative information wars, see *ALA Office for Information Technology Policy* (visited Sept. 30, 1999) <www.ala.org/oitp/copyright.html>; and *Digital Millennium Copyright Act* (visited Sept. 30, 1999) <www.educause.edu/issues/dmca.html>. The outcome of these legislative battles will define what information can and cannot be owned. The rules will be set for the corporate fencing off of the Internet.

But before we consign the twenty-first century of legal information to a *Blade Runner* script treatment, we should seek out a ray of hope. The students who are currently enrolled in law school are the most sophisticated users of information in history. If they become inspired to take on the challenge, they could remake the legal information system. They will not have to unlearn the old system. They are not laden with old assumptions. If the new generation had the reins of power placed in their hands, they could pull it off. To do this, we need a revolution. Skipping several generations, the mantle of power in the legal profession, at least on questions of information, must pass to the youngest segment of the profession. It is always younger lawyers who do research in law firms. If only the power to configure this information could rest with them as well. This group could seize power and demand high quality information, spending dollars only on systems that deserve to be relied upon. The vendors of information will respond to the market; the legal world can have the quality of information it demands. The revolution must take place in the marketplace.

This may seem to be a slim reed to lean upon, but it is better than thinking about a future in which Rupert Murdoch is providing legal information via cable television. When the realities of *The Practice* and the practice of law start to blur, the game will be lost. I beseech those who are in authority in legal institutions to relinquish decision making on information issues to the new generation of legal workers. Thus I hereby call the younger generation to man the ramparts of cognitive authority. Demand more than sizzle in your information systems. Make informed choices and demand value-enhanced information. Do not sell out for the cheap fix or the information system that is easy to use but unaccountable. Save us.