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## The Most-Cited Law Review Articles of All Time

Fred R. Shapiro  
*Yale Law School*

Michelle Pearce  
*Harvard Law School*, [mpearse@law.harvard.edu](mailto:mpearse@law.harvard.edu)

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# THE MOST-CITED LAW REVIEW ARTICLES OF ALL TIME

*Fred R. Shapiro\**  
*Michelle Pearse\*\**

*This Essay updates two well-known earlier studies (dated 1985 and 1996) by the first coauthor, setting forth lists of the most-cited law review articles. New research tools from the HeinOnline and Web of Science databases now allow lists to be compiled that are more thorough and more accurate than anything previously possible. Tables printed here present the 100 most-cited legal articles of all time, the 100 most-cited articles of the last twenty years, and some additional rankings. Characteristics of the top-ranked publications, authors, and law schools are analyzed as are trends in schools of legal thought. Data from the all-time rankings shed light on contributions to legal scholarship made over a long historical span; the recent-article rankings speak more to the impact of scholarship produced in the current era. The authors discuss alternative tools and metrics for measuring the impact of legal scholarship, running selected articles from the rankings through these tools to serve as points of illustration. The authors then contemplate how these alternative tools and metrics intersect with traditional citation studies and how they might impact legal scholarship in the future.*

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\* Associate Librarian for Collections and Access and Lecturer in Legal Research, Yale Law School; Editor, YALE BOOK OF QUOTATIONS (2006) and OXFORD DICTIONARY OF AMERICAN LEGAL QUOTATIONS (1993). Fred Shapiro is grateful to Gloria Jean Gong and Anastasiya Lisovskaya for their splendid research assistance, to Akhil Amar for his insightful suggestions, and especially to Blair Kauffman—the finest law library director in the country—for his encouragement and support.

\*\* Librarian for Open Access Initiatives and Scholarly Communication, Harvard Law School. Michelle Pearse is grateful to Caitlin Elwood for her superb research assistance. She also wants to thank Travis Coan for his valuable feedback.

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#### I. PREVIOUS STUDIES AND RATIONALE (SHAPIRO)

This is the third in a series of studies that I have authored enumerating the most-cited legal articles—that is, the articles most often cited within other articles.<sup>1</sup> The two previous installments attracted considerable attention in both the legal community and the general media. Jack Balkin and Sanford Levinson wrote, “Fred Shapiro can lay claim to be the founding father of a new and peculiar discipline: ‘legal citology.’”<sup>2</sup> The *Wall Street Journal* ran a front-page profile of me based on the citation rankings,<sup>3</sup> popularizing Balkin and Levinson’s term “citology” to the point where Britain’s *Guardian* newspaper included the term in a glossary of new words of the 1990s.<sup>4</sup> Herma Hill Kay, with tongue planted firmly in cheek, hailed my work:

Footnotes nowadays are not phony excrescences; they are the raw data used by the hottest new school of legal scholarship, the citation analysts. These bibliotechs have shown once and for all that nobody reads the text of other people’s articles anyway. Anybody who is anybody in any field you care to name has already said the same thing in different words a dozen

1. The two previous studies were Fred R. Shapiro, *The Most-Cited Law Review Articles*, 73 CALIF. L. REV. 1540 (1985) [hereinafter Shapiro, *The Most-Cited Law Review Articles*] and Fred R. Shapiro, *The Most-Cited Law Review Articles Revisited*, 71 CHI.-KENT L. REV. 751 (1996) [hereinafter Shapiro, *The Most-Cited Law Review Articles Revisited*].

2. J.M. Balkin & Sanford Levinson, *How To Win Cites and Influence People*, 71 CHI.-KENT L. REV. 843, 843 (1996).

3. Paul M. Barrett, “Citology,” *the Study of Footnotes, Sweeps the Law Schools—Thank a Yale Librarian Who Got His Start as a Child Interested in Baseball Stats*, WALL ST. J., Jan. 22, 1997, at A1.

4. David Rowan, *Glossary for the 90s*, GUARDIAN (London), May 10, 1997, at B82.

times before. There is nothing new under the sun. The only thing that is important is who cites whom. If you're cited, that means you're identified as a player in the game: a scholar of significance.<sup>5</sup>

I also published a more specific "most-cited" compilation listing the top thirty articles from the *Yale Law Journal* on the occasion of that law review's centennial.<sup>6</sup> Without claiming too much significance for citology, I described citology as more than a mere parlor game and as a potentially useful tool for studying the impact of scholarship:

Citation analysis is now extensively used by information scientists and sociologists to study the history and structure of the natural sciences and other disciplines . . . .

. . . Authors too have been evaluated through tabulation of citations to their writings. Citation counts have been utilized in assessing scholars' work for purposes of grant awards, tenure, or promotion decisions.

Those using citation data for evaluative purposes have justified such use by pointing to research demonstrating a high correlation between the total of citations to a scientist's or scholar's writings and judgments by peers of the "'productivity,' 'significance,' 'quality,' 'utility,' 'influence,' 'effectiveness,' or 'impact' of scientists and their scholarly products." One investigator has gone so far as to say that "citations and peer ratings appear to be virtually the same measurement."

Almost all citation analysts, however, are careful to note that citation counts measure a "quality" which is socially defined, reflecting the utility of the writing in question to other scholars, rather than gauging its intrinsic merit. Furthermore, the value of the counts may be lessened by limitations in the accuracy, coverage, or time-frame of the source data. For these reasons and others, evaluative use of citation analysis has remained controversial.

Even with their acknowledged limitations, citation counts are attractive as relatively objective tools for assessing scholarly impact. They can be used not only to gauge the impact of a given author or writing, but also to identify which writings are the most frequently cited, taken to be a rough measure of the writings which have had the most extensive impact.<sup>7</sup>

Both of my earlier studies used then-available tools to compile their rankings. The first compilation, published in the *California Law Review* in 1985,<sup>8</sup> relied on browsing through the print volume of *Shepard's Law Review Citations* and looking for long lists of citations. The second one,

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5. Herma Hill Kay, *In Defense of Footnotes*, 32 ARIZ. L. REV. 419, 426 (1990) (footnote omitted).

6. Fred R. Shapiro, *The Most-Cited Articles from The Yale Law Journal*, 100 YALE L.J. 1449 (1991).

7. *Id.* at 1453–54 (footnotes omitted). For more extensive discussion of citation analysis, see *id.* at 1453–58; Shapiro, *The Most-Cited Law Review Articles*, *supra* note 1, at 1540–44; and the sources referred to in those articles.

8. Shapiro, *The Most-Cited Law Review Articles*, *supra* note 1.

appearing in the *Chicago-Kent Law Review* in 1996,<sup>9</sup> employed searches of the online and print versions of the *Social Sciences Citation Index*.

Both of the prior studies also had limitations stemming from the coverage and functionality of their methodology. Because *Shepard's Law Review Citations* covered only citations since 1957 to articles published since 1947, the 1985 ranking excluded pre-1947 articles. Scholarship in interdisciplinary journals not covered by *Shepard's* was also excluded. The 1996 ranking drew on the more comprehensive data available in the *Social Sciences Citation Index*, which had no beginning date for cited publications and therefore encompassed older articles. The citing coverage did have a 1956 commencement date, however, so that older articles were still disfavored because pre-1956 citations to them were not counted.

## II. CURRENT METHODOLOGY (SHAPIRO)

This third study benefits greatly from the development of online citators in law and in the social sciences. The limitations of past studies fall before the spectacular capabilities of the HeinOnline and Web of Science databases. HeinOnline, produced by the William S. Hein Company, includes the vast majority of the entire United States law review literature from the nineteenth and twentieth centuries.<sup>10</sup> I devised a search that retrieved virtually all of the over 1.4 million articles in that database<sup>11</sup> and then used the ability of HeinOnline to sort those articles by "Number of Times Cited" to generate citation totals that are both more thorough and more accurate than any previous counts.

I did not, however, take the HeinOnline totals as the final ranking of the most-cited legal articles of all time. HeinOnline, though wonderfully comprehensive in its coverage of law reviews published by law schools, omits some of the legal journals published by university presses, learned societies, and commercial entities.<sup>12</sup> More importantly, HeinOnline has only modest coverage of social science journals. In a legal academy that has become quite interdisciplinary, part of the definition of a legal article's influence seemingly should be its impact on scholarship outside of law. Therefore, it was necessary to add to a legal article's HeinOnline citing-number the total

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9. Shapiro, *The Most-Cited Law Review Articles Revisited*, *supra* note 1.

10. The more than 1,620 periodicals on HeinOnline do include hundreds of non-U.S. titles, although none of the foreign articles appear even to come close to qualifying for HeinOnline's "most-cited" rankings.

11. The search, based on lists of the most common words in the English language, was "the OR of OR a OR to OR in OR is OR that OR it OR he OR was OR for OR on OR are OR as OR with OR his OR they OR at OR be OR this OR have OR from OR one OR had OR by OR law."

12. Some examples are *Law and Human Behavior*, *Behavioral Sciences and the Law*, *International Journal of Law and Psychiatry*, and *Common Market Law Review*.

number of citations by social science journals to that article, resulting in a relatively complete count of law citations plus social science citations.<sup>13</sup>

The most balanced, precise, and structured source of citation data in the social sciences is Web of Science, Thomson Reuters' current version of the *Social Sciences Citation Index*. Web of Science covers 2,697 journals across fifty-five social science disciplines going back to the year 1900. I was able to search for all the articles classified in the "Law" category, sort the resulting articles by "Times Cited," and thus create a listing of the legal articles most cited in Web of Science. Looking at the articles near the top of that listing, I subtracted their citations in legal journals to avoid double-counting with the HeinOnline law citations.<sup>14</sup> The remaining Web of Science social science citations were then added to the HeinOnline totals to create the final totals used to rank the most-cited legal articles of all time.

The term "legal article" means not only articles published in traditional law reviews like the *California Law Review* and the *Duke Law Journal* but also articles appearing in "law and" journals such as the *Journal of Law and Economics* and even in purely social science journals like the *American Sociological Review*. For the "law and" journals and the social science periodicals, articles were designated "legal articles" if over 50 percent of citations to them occurred in law reviews or "law and" journals. As I have written before, "My theory in doing so was that I wanted to represent law-related scholarship as comprehensively as possible, and that a predominance of citations in law-related journals seems to identify an article as being law-related."<sup>15</sup>

Under this 50 percent rule, articles in "law and" journals by R.H. Coase,<sup>16</sup> Marc Galanter,<sup>17</sup> and George L. Priest and Benjamin Klein<sup>18</sup> qualified for the all-time top 100 most-cited articles list. Similarly qualifying

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13. In this article, "social science journals" and "social science citations" are used as shorthand for "social science, humanities, and natural science journals" and "social science, humanities, and natural science citations," since Web of Science indexes not only the social sciences but also the humanities and natural sciences.

14. The number of Web of Science citations from legal journals was obtained using the database's own classification of "Web of Science Categories," one of the categories being "Law."

15. Shapiro, *The Most-Cited Law Review Articles Revisited*, *supra* note 1, at 755. William M. Landes and Richard A. Posner criticize my 50 percent rule for penalizing articles having too many citations. See William M. Landes & Richard A. Posner, *Heavily Cited Articles in Law*, 71 CHI.-KENT L. REV. 825, 825-26 (1996). Their example of an article excluded from my lists by the rule is Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76 J. POL. ECON. 169 (1968). My response is that the Becker article (an excellent example of a supercited article hurt by the 50 percent rule) is primarily an economics article in an economics journal. Such papers are out of place in a law-oriented list and also difficult to catch systematically.

16. R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

17. Marc Galanter, *Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change*, 9 LAW & SOC'Y REV. 95 (1974).

18. George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984).

were articles in purely social science journals written by Stewart Macaulay,<sup>19</sup> Henry G. Manne,<sup>20</sup> Richard A. Posner,<sup>21</sup> John Rawls,<sup>22</sup> Owen M. Fiss,<sup>23</sup> and Catharine A. MacKinnon.<sup>24</sup>

Table I is the ranking of the top 100 most-cited articles of all time. Because it takes decades for an article to amass the stratospheric citation count needed to make such a list, I compiled additional rankings (Table II) of the five most-cited legal articles published each year from 1990 to 2009. Individual-year listings were necessary because, for recent articles, the number of citations needed to be a citation leader rises rapidly from each year to the one before it. For example, a 2007 article has little chance of competing with the leaders published in 2005. It should be noted that, for practical reasons, these recent-year rankings are taken solely from HeinOnline and do not reflect nonlegal social science citations to the legal articles of those years.<sup>25</sup> If that caveat and the other limitations of citation-counting are kept in mind, these small lists should serve to shed light on the dominant articles, scholars, topics, and trends in legal scholarship of the last twenty years.

Recent articles are not the only ones chronologically disfavored in the main list of 100 all-time citation classics. Older articles are also handicapped by the fact that the citing literature was much smaller and the footnoting practices much less developed in the period before the late twentieth century. Therefore, Table III sets forth the fifteen most-cited articles published before 1960 according to HeinOnline citation totals.

A final bias in the citation rankings is related to subject matter. Some areas, such as constitutional law, civil procedure, contracts, property, torts, and criminal law, have large scholarly literatures affording ample opportunities for being cited. Other areas have smaller literatures and less opportunity for citations that could earn articles in these fields inclusion on “most-cited” rosters. Therefore, Table IV presents lists of the ten most-cited articles (according to HeinOnline citation totals) in seven smaller fields—antitrust law, corporate and securities law, family law, intellectual property, international law, labor and employment law, and legal ethics and legal profession.

Table V ranks the law reviews that have published the most articles in the all-time and recent-articles lists. Table V also presents rankings of the law schools where the most authors of articles on the all-time and recent-

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19. Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*, 28 AM. SOC. REV. 55 (1963).

20. Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110 (1965).

21. Richard A. Posner, *Theories of Economic Regulation*, 5 BELL J. ECON. & MGMT. SCI. 335 (1974).

22. John Rawls, *Two Concepts of Rules*, 64 PHIL. REV. 3 (1955).

23. Owen M. Fiss, *Groups and the Equal Protection Clause*, 5 PHIL. & PUB. AFF. 107 (1976).

24. Catharine A. MacKinnon, *Feminism, Marxism, Method, and the State: Toward Feminist Jurisprudence*, 8 SIGNS 635 (1983).

25. Therefore, some citation totals in Table II (and also Table IV) may be different from the citation total for the same article in Table I.

articles lists were faculty members. There are separate rankings based on faculty affiliations at the time of publication and faculty affiliations now. Another ranking records which law schools can claim the most authors as alumni, again looking at both the all-time list and the recent list.

TABLE I.  
MOST-CITED LAW REVIEW ARTICLES OF ALL TIME  
COMPILED BY FRED R. SHAPIRO

- |     |      |   |
|-----|------|---|
| 1.  | 5157 | R.H. Coase, <i>The Problem of Social Cost</i> , 3 J.L. & ECON. 1 (1960).  |
| 2.  | 3678 | Samuel D. Warren & Louis D. Brandeis, <i>The Right to Privacy</i> , 4 HARV. L. REV. 193 (1890).   |
| 3.  | 3138 | O.W. Holmes, <i>The Path of the Law</i> , 10 HARV. L. REV. 457 (1897).  |
| 4.  | 2771 | Gerald Gunther, <i>The Supreme Court, 1971 Term—Foreword: In Search of Evolving Doctrine on a Changing Court: A Model for a Newer Equal Protection</i> , 86 HARV. L. REV. 1 (1972). |
| 5.  | 2343 | Herbert Wechsler, <i>Toward Neutral Principles of Constitutional Law</i> , 73 HARV. L. REV. 1 (1959).   |
| 6.  | 1980 | Guido Calabresi & A. Douglas Melamed, <i>Property Rules, Liability Rules, and Inalienability: One View of the Cathedral</i> , 85 HARV. L. REV. 1089 (1972).                         |
| 7.  | 1874 | Charles A. Reich, <i>The New Property</i> , 73 YALE L.J. 733 (1964).  |
| 8.  | 1794 | Charles R. Lawrence III, <i>The Id, the Ego, and Equal Protection: Reckoning with Unconscious Racism</i> , 39 STAN. L. REV. 317 (1987).   |
| 9.  | 1701 | William J. Brennan, Jr., <i>State Constitutions and the Protection of Individual Rights</i> , 90 HARV. L. REV. 489 (1977).  |
| 10. | 1653 | Robert H. Bork, <i>Neutral Principles and Some First Amendment Problems</i> , 47 IND. L.J. 1 (1971).  |
| 11. | 1600 | Abram Chayes, <i>The Role of the Judge in Public Law Litigation</i> , 89 HARV. L. REV. 1281 (1976).   |
| 12. | 1580 | Frank I. Michelman, <i>Property, Utility, and Fairness: Comments on the Ethical Foundations of "Just Compensation" Law</i> , 80 HARV. L. REV. 1165 (1967).                          |
| 13. | 1538 | William L. Prosser, <i>The Assault upon the Citadel (Strict Liability to the Consumer)</i> , 69 YALE L.J. 1099 (1960).  |
| 14. | 1485 | Duncan Kennedy, <i>Form and Substance in Private Law Adjudication</i> , 89 HARV. L. REV. 1685 (1976).   |
| 15. | 1465 | Stewart Macaulay, <i>Non-Contractual Relations in Business: A Preliminary Study</i> , 28 AM. SOC. REV. 55 (1963).   |
| 16. | 1370 | Robert M. Cover, <i>The Supreme Court, 1982 Term—Foreword: Nomos and Narrative</i> , 97 HARV. L. REV. 4 (1983).   |
| 17. | 1299 | Anthony G. Amsterdam, <i>Perspectives on the Fourth Amendment</i> , 58 MINN. L. REV. 349 (1974).  |
| 18. | 1286 | Angela P. Harris, <i>Race and Essentialism in Feminist Legal Theory</i> , 42 STAN. L. REV. 581 (1990).  |
| 19. | 1236 | Robert H. Mnookin & Lewis Kornhauser, <i>Bargaining in the Shadow of the Law: The Case of Divorce</i> , 88 YALE L.J. 950 (1979).  |
| 20. | 1224 | John Hart Ely, <i>The Wages of Crying Wolf: A Comment on Roe v. Wade</i> , 82 YALE L.J. 920 (1973).   |
| 21. | 1195 | William L. Cary, <i>Federalism and Corporate Law: Reflections upon Delaware</i> , 83 YALE L.J. 663 (1974).  |
| 22. | 1167 | Owen M. Fiss, <i>Against Settlement</i> , 93 YALE L.J. 1073 (1984).   |
| 23. | 1065 | H.L.A. Hart, <i>Positivism and the Separation of Law and Morals</i> , 71 HARV. L. REV. 593 (1958).  |
| 24. | 1034 | Paul Brest, <i>The Misconceived Quest for the Original Understanding</i> , 60 B.U. L. REV. 204 (1980).  |



25. 1024 Frank I. Michelman, *The Supreme Court, 1968 Term—Foreword: On Protecting the Poor through the Fourteenth Amendment*, 83 HARV. L. REV. 7 (1969).
26. 1023 Lon L. Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353 (1978).
27. 1017 Owen M. Fiss, *The Supreme Court, 1978 Term—Foreword: The Forms of Justice*, 93 HARV. L. REV. 1 (1979).
28. 988 Herbert Wechsler, *The Political Safeguards of Federalism: The Role of the States in the Composition and Selection of the National Government*, 54 COLUM. L. REV. 543 (1954).
29. 978 Henry G. Manne, *Mergers and the Market for Corporate Control*, 73 J. POL. ECON. 110 (1965).
30. 976 William L. Prosser, *The Fall of the Citadel (Strict Liability to the Consumer)*, 50 MINN. L. REV. 791 (1966).
31. 975 Joseph L. Sax, *Takings and the Police Power*, 74 YALE L.J. 36 (1964).
32. 948 Kimberlé Williams Crenshaw, *Race, Reform, and Retrenchment: Transformation and Legitimation in Antidiscrimination Law*, 101 HARV. L. REV. 1331 (1988).
33. 947 Mari J. Matsuda, *Public Response to Racist Speech: Considering the Victim's Story*, 87 MICH. L. REV. 2320 (1989).
34. 942 Frank H. Easterbrook & Daniel R. Fischel, *The Proper Role of a Target's Management in Responding to a Tender Offer*, 94 HARV. L. REV. 1161 (1981).
35. 932 William W. Van Alstyne, *The Demise of the Right-Privilege Distinction in Constitutional Law*, 81 HARV. L. REV. 1439 (1968).
36. 931 Antonin Scalia, *The Rule of Law as a Law of Rules*, 56 U. CHI. L. REV. 1175 (1989).
37. 906 Marc Galanter, *Why the "Haves" Come Out Ahead: Speculations on the Limits of Legal Change*, 9 LAW & SOC'Y REV. 95 (1974).
38. 905 Henry M. Hart, Jr., *The Power of Congress to Limit the Jurisdiction of Federal Courts: An Exercise in Dialectic*, 66 HARV. L. REV. 1362 (1953).
39. 900 Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809 (1935).
40. 895 Alexander Meiklejohn, *The First Amendment Is an Absolute*, 1961 SUP. CT. REV. 245 (1961).
41. 891 Thomas I. Emerson, *Toward a General Theory of the First Amendment*, 72 YALE L.J. 877 (1963).
42. 890 Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849 (1987).
43. 882 Karl N. Llewellyn, *Remarks on the Theory of Appellate Decision and the Rules or Canons about How Statutes Are to Be Construed*, 3 VAND. L. REV. 395 (1950).
44. 872 Kimberlé Crenshaw, *Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color*, 43 STAN. L. REV. 1241 (1991).
45. 869 William L. Prosser, *Privacy*, 48 CALIF. L. REV. 383 (1960).
46. 856 Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).
- (tie) 46. 856 Cass R. Sunstein, *Interest Groups in American Public Law*, 38 STAN. L. REV. 29 (1985).
48. 838 Henry J. Friendly, *"Some Kind of Hearing"*, 123 U. PA. L. REV. 1267 (1975).
49. 831 L.L. Fuller & William R. Perdue, Jr., *The Reliance Interest in Contract Damages*, 46 YALE L.J. 52 (1936).
50. 820 Wesley N. Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE L.J. 16 (1913).
51. 819 Friedrich Kessler, *Contracts of Adhesion—Some Thoughts about Freedom of Contract*, 43 COLUM. L. REV. 629 (1943).
52. 816 Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1667 (1975).
53. 814 Felix Frankfurter, *Some Reflections on the Reading of Statutes*, 47 COLUM. L. REV. 527 (1947).
- (tie)

53. 814 (tie) Lon L. Fuller, *Positivism and Fidelity to Law—A Reply to Professor Hart*, 71 HARV. L. REV. 630 (1958).
55. 812 Thomas C. Grey, *Do We Have an Unwritten Constitution?*, 27 STAN. L. REV. 703 (1975).
56. 798 James B. Thayer, *The Origin and Scope of the American Doctrine of Constitutional Law*, 7 HARV. L. REV. 129 (1893).
57. 783 Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998).
58. 782 Anthony G. Amsterdam, Note, *The Void-for-Vagueness Doctrine in the Supreme Court*, 109 U. PA. L. REV. 67 (1960).
59. 778 Frank Michelman, *Law's Republic*, 97 YALE L.J. 1493 (1988).
60. 775 Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957 (1982).
61. 774 George L. Priest & Benjamin Klein, *The Selection of Disputes for Litigation*, 13 J. LEGAL STUD. 1 (1984).
62. 771 Frances E. Olsen, *The Family and the Market: A Study of Ideology and Legal Reform*, 96 HARV. L. REV. 1497 (1983).
63. 766 Ian Ayres & Robert Gertner, *Filling Gaps in Incomplete Contracts: An Economic Theory of Default Rules*, 99 YALE L.J. 87 (1989).
64. 765 Richard A. Posner, *Theories of Economic Regulation*, 5 BELL J. ECON. & MGMT. SCI. 335 (1974).
65. 752 John Rawls, *Two Concepts of Rules*, 64 PHIL. REV. 3 (1955).
66. 749 John W. Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825 (1973).
67. 744 Cass R. Sunstein, *Beyond the Republican Revival*, 97 YALE L.J. 1539 (1988).
68. 743 Richard Delgado, *Storytelling for Oppositionists and Others: A Plea for Narrative*, 87 MICH. L. REV. 2411 (1989).
69. 739 Guido Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 YALE L.J. 499 (1961).
70. 734 Arthur Allen Leff, *Unconscionability and the Code—The Emperor's New Clause*, 115 U. PA. L. REV. 485 (1967).
71. 732 H. Jefferson Powell, *The Original Understanding of Original Intent*, 98 HARV. L. REV. 885 (1985).
72. 729 Owen M. Fiss, *Groups and the Equal Protection Clause*, 5 PHIL. & PUB. AFF. 107 (1976).
73. 728 Philip Areeda & Donald F. Turner, *Predatory Pricing and Related Practices Under Section 2 of the Sherman Act*, 88 HARV. L. REV. 697 (1975).
74. 726 Ronald J. Gilson & Reinier H. Kraakman, *The Mechanisms of Market Efficiency*, 70 VA. L. REV. 549 (1984).
75. 722 William N. Eskridge, Jr., *The New Textualism*, 37 UCLA L. REV. 621 (1990).
76. 718 Marc Galanter, *Reading the Landscape of Disputes: What We Know and Don't Know (And Think We Know) About Our Allegedly Contentious and Litigious Society*, 31 UCLA L. REV. 4 (1983).
77. 717 Henry J. Friendly, *In Praise of Erie—and of the New Federal Common Law*, 39 N.Y.U. L. REV. 383 (1964).
78. 715 Charles Fairman, *Does the Fourteenth Amendment Incorporate the Bill of Rights? The Original Understanding*, 2 STAN. L. REV. 5 (1949).
79. 714 Mark V. Tushnet, *Following the Rules Laid Down: A Critique of Interpretivism and Neutral Principles*, 96 HARV. L. REV. 781 (1983).
80. 708 (tie) Frank I. Michelman, *The Supreme Court, 1985 Term—Foreword: Traces of Self-Government*, 100 HARV. L. REV. 4 (1986).
80. 708 (tie) Henry P. Monaghan, *The Supreme Court, 1974 Term—Foreword: Constitutional Common Law*, 89 HARV. L. REV. 1 (1975).
82. 700 John Hart Ely, *Legislative and Administrative Motivation in Constitutional Law*, 79 YALE L.J. 1205 (1970).

83.	696	Paul Brest, <i>The Supreme Court, 1975 Term—Foreword: In Defense of the Antidiscrimination Principle</i> , 90 HARV. L. REV. 1 (1976).
84.	688	Laurence H. Tribe, <i>Trial by Mathematics: Precision and Ritual in the Legal Process</i> , 84 HARV. L. REV. 1329 (1971).
85.	685	Henry B. Hansmann, <i>The Role of Nonprofit Enterprise</i> , 89 YALE L.J. 835 (1980).
86.	684	Harry T. Edwards, <i>The Growing Disjunction between Legal Education and the Legal Profession</i> , 91 MICH. L. REV. 34 (1992).
87.	680	Neil Gotanda, <i>A Critique of “Our Constitution Is Color-Blind”</i> , 44 STAN. L. REV. 1 (1991).
88.	678	Martha Minow, <i>The Supreme Court, 1986 Term—Foreword: Justice Engendered</i> , 101 HARV. L. REV. 10 (1987).
89.	673	Alan David Freeman, <i>Legitimizing Racial Discrimination through Antidiscrimination Law: A Critical Review of Supreme Court Doctrine</i> , 62 MINN. L. REV. 1049 (1978).
90.	671	Ian R. Macneil, <i>Contracts: Adjustment of Long-Term Economic Relations Under Classical, Neoclassical, and Relational Contract Law</i> , 72 NW. U. L. REV. 854 (1978).
91.	667	Lawrence Gene Sager, <i>Fair Measure: The Legal Status of Underenforced Constitutional Norms</i> , 91 HARV. L. REV. 1212 (1978).
92.	666	Henry M. Hart, Jr., <i>The Supreme Court, 1958 Term—Foreword: The Time Chart of the Justices</i> , 73 HARV. L. REV. 84 (1959).
93.	663	Edwin M. Borchard, <i>Government Liability in Tort</i> , 34 YALE L.J. 1 (1924). (tie)
93.	663	Catharine A. MacKinnon, <i>Feminism, Marxism, Method, and the State: Toward Feminist Jurisprudence</i> , 8 SIGNS 635 (1983). (tie)
95.	656	Charles L. Black, Jr., <i>The Supreme Court, 1966 Term—Foreword: “State Action,” Equal Protection, and California’s Proposition 14</i> , 81 HARV. L. REV. 69 (1967). (tie)
95.	656	Jonathan R. Macey, <i>Promoting Public-Regarding Legislation through Statutory Interpretation: An Interest Group Model</i> , 86 COLUM. L. REV. 223 (1986). (tie)
97.	655	Mari J. Matsuda, <i>Looking to the Bottom: Critical Legal Studies and Reparations</i> , 22 HARV. C.R.-C.L. L. REV. 323 (1987).
98.	653	Akhil Reed Amar, <i>Of Sovereignty and Federalism</i> , 96 YALE L.J. 1425 (1987).
99.	649	Paul M. Bator, <i>Finality in Criminal Law and Federal Habeas Corpus for State Prisoners</i> , 76 HARV. L. REV. 441 (1963).
100.	646	Owen M. Fiss, <i>Objectivity and Interpretation</i> , 34 STAN. L. REV. 739 (1982).

*Note:* The column of numbers on the left is the ranking. The second column is the total number of citations in HeinOnline as of November 2011, plus the total number of nonlegal citations in Web of Science as of November 2011.

TABLE II.  
MOST-CITED LAW REVIEW ARTICLES OF RECENT YEARS (FIVE MOST-CITED ARTICLES BY YEAR OF PUBLICATION FOR EACH YEAR FROM 1990 TO 2009)  
COMPILED BY FRED R. SHAPIRO

1990		
1.	1228	Angela P. Harris, <i>Race and Essentialism in Feminist Legal Theory</i> , 42 STAN. L. REV. 581 (1990).
2.	719	William N. Eskridge, Jr., <i>The New Textualism</i> , 37 UCLA L. REV. 621 (1990).
3.	559	William N. Eskridge, Jr. & Philip P. Frickey, <i>Statutory Interpretation as Practical Reasoning</i> , 42 STAN. L. REV. 321 (1990).
4.	553	Katharine T. Bartlett, <i>Feminist Legal Methods</i> , 103 HARV. L. REV. 829 (1990).
5.	530	Michael W. McConnell, <i>The Origins and Historical Understanding of Free Exercise of Religion</i> , 103 HARV. L. REV. 1409 (1990).

**1991**

1. 636 Neil Gotanda, *A Critique of "Our Constitution Is Color-Blind"*, 44 STAN. L. REV. 1 (1991).
2. 632 Kimberlé Crenshaw, *Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color*, 43 STAN. L. REV. 1241 (1991).
3. 615 Akhil Reed Amar, *The Bill of Rights as a Constitution*, 100 YALE L.J. 1131 (1991).
4. 526 Martha R. Mahoney, *Legal Images of Battered Women: Redefining the Issue of Separation*, 90 MICH. L. REV. 1 (1991).
5. 411 Trina Grillo, *The Mediation Alternative: Process Dangers for Women*, 100 YALE L.J. 1545 (1991).

**1992**

1. 675 Harry T. Edwards, *The Growing Disjunction between Legal Education and the Legal Profession*, 91 MICH. L. REV. 34 (1992).
2. 565 Kathleen M. Sullivan, *The Supreme Court, 1991 Term—Foreword: The Justice of Rules and Standards*, 106 HARV. L. REV. 22 (1992).
3. 554 Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557 (1992).
4. 467 Cass R. Sunstein, *What's Standing After Lujan? Of Citizen Suits, "Injuries," and Article III*, 91 MICH. L. REV. 163 (1992).
5. 425 Stephen Breyer, *On the Uses of Legislative History in Interpreting Statutes*, 65 S. CAL. L. REV. 845 (1992).

**1993**

1. 428 Daniel A. Farber & Suzanna Sherry, *Telling Stories out of School: An Essay on Legal Narratives*, 45 STAN. L. REV. 807 (1993).
2. 363 Cheryl I. Harris, *Whiteness as Property*, 106 HARV. L. REV. 1707 (1993).
3. 349 Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533 (1993).
4. 345 Barbara J. Flagg, *"Was Blind, But Now I See": White Race Consciousness and the Requirement of Discriminatory Intent*, 91 MICH. L. REV. 953 (1993).
5. 307 Richard H. Pildes & Richard G. Niemi, *Expressive Harms, "Bizarre Districts," and Voting Rights: Evaluating Election-District Appearances After Shaw v. Reno*, 92 MICH. L. REV. 483 (1993).

**1994**

1. 524 Akhil Reed Amar, *Fourth Amendment First Principles*, 107 HARV. L. REV. 757 (1994).
2. 354 Lawrence Lessig & Cass R. Sunstein, *The President and the Administration*, 94 COLUM. L. REV. 1 (1994).
3. 337 Edward L. Rubin & Malcolm Feeley, *Federalism: Some Notes on a National Neurosis*, 41 UCLA L. REV. 903 (1994).
4. 331 Stephen B. Bright, *Counsel for the Poor: The Death Sentence Not for the Worst Crime but for the Worst Lawyer*, 103 YALE L.J. 1835 (1994).
4. 331 Steven G. Calabresi & Saikrishna B. Prakash, *The President's Power to Execute the Laws*, 104 YALE L.J. 541 (1994).

## 1995

1. 575 Linda Hamilton Krieger, *The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity*, 47 STAN. L. REV. 1161 (1995).
2. 356 John C. Coffee, Jr., *Class Wars: The Dilemma of the Mass Tort Class Action*, 95 COLUM. L. REV. 1343 (1995).
3. 333 Lawrence Lessig, *The Regulation of Social Meaning*, 62 U. CHI. L. REV. 943 (1995).
4. 329 William Michael Treanor, *The Original Understanding of the Takings Clause and the Political Process*, 95 COLUM. L. REV. 782 (1995).
5. 307 Paul Butler, *Racially Based Jury Nullification: Black Power in the Criminal Justice System*, 105 YALE L.J. 677 (1995).

## 1996

1. 541 David R. Johnson & David Post, *Law and Borders—The Rise of Law in Cyberspace*, 48 STAN. L. REV. 1367 (1996).
2. 478 Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903 (1996).
3. 443 Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021 (1996).
4. 374 Reva B. Siegel, *"The Rule of Love": Wife Beating as Prerogative and Privacy*, 105 YALE L.J. 2117 (1996).
5. 338 David A. Strauss, *Common Law Constitutional Interpretation*, 63 U. CHI. L. REV. 877 (1996).

## 1997

1. 468 Curtis A. Bradley & Jack L. Goldsmith, *Customary International Law as Federal Common Law: A Critique of the Modern Position*, 110 HARV. L. REV. 815 (1997).
2. 453 Richard H. McAdams, *The Origin, Development, and Regulation of Norms*, 96 MICH. L. REV. 338 (1997).
3. 422 Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 YALE L.J. 2599 (1997).
4. 337 Mark A. Lemley, *The Economics of Improvement in Intellectual Property Law*, 75 TEX. L. REV. 989 (1997).
5. 331 Dan M. Kahan, *Social Influence, Social Meaning, and Deterrence*, 83 VA. L. REV. 349 (1997).

## 1998

1. 718 Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998).
2. 471 Michael C. Dorf & Charles F. Sabel, *A Constitution of Democratic Experimentalism*, 98 COLUM. L. REV. 267 (1998).
3. 320 Michael A. Heller, *The Tragedy of the Anticommons: Property in the Transition from Marx to Markets*, 111 HARV. L. REV. 621 (1998).
4. 297 Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CALIF. L. REV. 479 (1998).
5. 288 Vicki Schultz, *Reconceptualizing Sexual Harassment*, 107 YALE L.J. 1683 (1998).

**1999**

1. 390 Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999).
2. 351 Yochai Benkler, *Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain*, 74 N.Y.U. L. REV. 354 (1999).
3. 289 Akhil Reed Amar, *Intratextualism*, 112 HARV. L. REV. 747 (1999).
4. 258 Patrick J. Schiltz, *On Being a Happy, Healthy, and Ethical Member of an Unhappy, Unhealthy, and Unethical Profession*, 52 VAND. L. REV. 871 (1999).
5. 247 Mark A. Lemley, *The Modern Lanham Act and the Death of Common Sense*, 108 YALE L.J. 1687 (1999).

**2000**

1. 424 Russell B. Korobkin & Thomas S. Ulen, *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*, 88 CALIF. L. REV. 1051 (2000).
2. 316 Larry D. Kramer, *Putting the Politics Back into the Political Safeguards of Federalism*, 100 COLUM. L. REV. 215 (2000).
3. 302 Jody Freeman, *The Private Role in Public Governance*, 75 N.Y.U. L. REV. 543 (2000).
4. 257 Robert C. Post & Reva B. Siegel, *Equal Protection by Law: Federal Antidiscrimination Legislation After Morrison and Kimel*, 110 YALE L.J. 441 (2000).
5. 252 Akhil Reed Amar, *The Supreme Court, 1999 Term—Foreword: The Document and the Doctrine*, 114 HARV. L. REV. 26 (2000).

**2001**

1. 371 Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245 (2001).
2. 369 William J. Stuntz, *The Pathological Politics of Criminal Law*, 100 MICH. L. REV. 505 (2001).
3. 300 Susan Sturm, *Second Generation Employment Discrimination: A Structural Approach*, 101 COLUM. L. REV. 458 (2001).
4. 295 Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495 (2001).
5. 289 Henry Hansmann & Reinier Kraakman, *The End of History for Corporate Law*, 89 GEO. L.J. 439 (2001).

**2002**

1. 273 David Cole, *Enemy Aliens*, 54 STAN. L. REV. 953 (2002).
2. 244 Yochai Benkler, *Coase's Penguin, or, Linux and The Nature of the Firm*, 112 YALE L.J. 369 (2002).
3. 211 John C. Coffee, Jr., *Understanding Enron: "It's About the Gatekeepers, Stupid"*, 57 BUS. LAW. 1403 (2002).
4. 204 Leti Volpp, *The Citizen and the Terrorist*, 49 UCLA L. REV. 1575 (2002).
5. 202 Lee Epstein & Gary King, *The Rules of Inference*, 69 U. CHI. L. REV. 1 (2002).

**2003**

1. 284 Robert C. Post, *The Supreme Court, 2002 Term—Fashioning the Legal Constitution: Culture, Courts, and Law*, 117 HARV. L. REV. 4 (2003).
2. 279 Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003).
3. 229 Mark J. Roe, *Delaware's Competition*, 117 HARV. L. REV. 588 (2003).
4. 197 Alan Schwartz & Robert E. Scott, *Contract Theory and the Limits of Contract Law*, 113 YALE L.J. 541 (2003).
5. 176 Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547 (2003).

**2004**

1. 240 Laurence H. Tribe, *Lawrence v. Texas: The "Fundamental Right" That Dare Not Speak Its Name*, 117 HARV. L. REV. 1893 (2004).
2. 227 Orly Lobel, *The Renew Deal: The Fall of Regulation and the Rise of Governance in Contemporary Legal Thought*, 89 MINN. L. REV. 342 (2004).
3. 166 Harold Hongju Koh, *International Law as Part of Our Law*, 98 AM. J. INT'L L. 43 (2004).
4. 164 Bruce Ackerman, *The Emergency Constitution*, 113 YALE L.J. 1029 (2004).
5. 146 Mark A. Lemley & R. Anthony Reese, *Reducing Digital Copyright Infringement without Restricting Innovation*, 56 STAN. L. REV. 1345 (2004).

**2005**

1. 259 Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521 (2005).
2. 236 Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031 (2005).
3. 214 Jerry Kang, *Trojan Horses of Race*, 118 HARV. L. REV. 1489 (2005).
4. 204 Lucian Arye Bebchuk, *The Case for Increasing Shareholder Power*, 118 HARV. L. REV. 833 (2005).
5. 176 Curtis A. Bradley & Jack L. Goldsmith, *Congressional Authorization and the War on Terrorism*, 118 HARV. L. REV. 2047 (2005).

**2006**

1. 157 Cass R. Sunstein, *Chevron Step Zero*, 92 VA. L. REV. 187 (2006).
2. 147 Jeremy Waldron, *The Core of the Case Against Judicial Review*, 115 YALE L.J. 1346 (2006).
3. 121 Stephen M. Bainbridge, *Director Primacy and Shareholder Disempowerment*, 119 HARV. L. REV. 1735 (2006).
4. 116 Adam Winkler, *Fatal in Theory and Strict in Fact: An Empirical Analysis of Strict Scrutiny in the Federal Courts*, 59 VAND. L. REV. 793 (2006).
5. 110 Judith Resnik, *Law's Migration: American Exceptionalism, Silent Dialogues, and Federalism's Multiple Ports of Entry*, 115 YALE L.J. 1564 (2006).

2007		
1.	124	Brett M. Frischmann & Mark A. Lemley, <i>Spillovers</i> , 107 COLUM. L. REV. 257 (2007).
2.	117	Jack M. Balkin, <i>Abortion and Original Meaning</i> , 24 CONST. COMMENT. 291 (2007).
3.	115	Robert Post & Reva Siegel, <i>Roe Rage: Democratic Constitutionalism and Backlash</i> , 42 HARV. C.R.-C.L. L. REV. 373 (2007).
4.	110	Lucian A. Bebchuk, <i>The Myth of the Shareholder Franchise</i> , 93 VA. L. REV. 675 (2007).
5.	102	Mark A. Lemley & Carl Shapiro, <i>Patent Holdup and Royalty Stacking</i> , 85 TEX. L. REV. 1991 (2007).

2008		
1.	114	Brandon L. Garrett, <i>Judging Innocence</i> , 108 COLUM. L. REV. 55 (2008).
2.	110	Steven L. Schwarcz, <i>Systemic Risk</i> , 97 GEO. L.J. 193 (2008).
3.	104	A. Benjamin Spencer, <i>Plausibility Pleading</i> , 49 B.C. L. REV. 431 (2008).
4.	91	William N. Eskridge, Jr. & Lauren E. Baer, <i>The Continuum of Deference: Supreme Court Treatment of Agency Statutory Interpretations from Chevron to Hamdan</i> , 96 GEO. L.J. 1083 (2008).
5.	78	Cristina M. Rodríguez, <i>The Significance of the Local in Immigration Regulation</i> , 106 MICH. L. REV. 567 (2008).

2009		
1.	75	Robert G. Bone, Twombly, <i>Pleading Rules, and the Regulation of Court Access</i> , 94 IOWA L. REV. 873 (2009).
2.	63	Dan M. Kahan, David A. Hoffman & Donald Braman, <i>Whose Eyes Are You Going to Believe? Scott v. Harris and the Perils of Cognitive Illiberalism</i> , 122 HARV. L. REV. 837 (2009).
3.	51	A. Benjamin Spencer, <i>Understanding Pleading Doctrine</i> , 108 MICH. L. REV. 1 (2009).
4.	49	Rachel E. Barkow, <i>Institutional Design and the Policing of Prosecutors: Lessons from Administrative Law</i> , 61 STAN. L. REV. 869 (2009).
5.	45	J. Harvie Wilkinson III, <i>Of Guns, Abortions, and the Unraveling Rule of Law</i> , 95 VA. L. REV. 253 (2009).

*Note:* The column of numbers on the left is the ranking within the year. The second column is the total number of citations in HeinOnline as of November 2011.

TABLE III.  
ADDITIONAL OLDER ARTICLES  
COMPILED BY FRED R. SHAPIRO

626	Charles Warren, <i>New Light on the History of the Federal Judiciary Act of 1789</i> , 37 HARV. L. REV. 49 (1923).
615	Max Radin, <i>Statutory Interpretation</i> , 43 HARV. L. REV. 863 (1930).
605	Julian W. Mack, <i>The Juvenile Court</i> , 23 HARV. L. REV. 104 (1909).
604	Alexander M. Bickel, <i>The Original Understanding and the Segregation Decision</i> , 69 HARV. L. REV. 1 (1955).
596	Karl N. Llewellyn, <i>Some Realism about Realism—Responding to Dean Pound</i> , 44 HARV. L. REV. 1222 (1931).
548	Charles L. Black, Jr., <i>The Lawfulness of the Segregation Decisions</i> , 69 YALE L.J. 421 (1960).
501	E. Merrick Dodd, Jr., <i>For Whom Are Corporate Managers Trustees?</i> , 45 HARV. L. REV. 1145 (1932).



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| 494 | Calvert Magruder, <i>Mental and Emotional Disturbance in the Law of Torts</i> , 49 HARV. L. REV. 1033 (1936).   |
| 483 | Harold D. Lasswell & Myres S. McDougal, <i>Legal Education and Public Policy: Professional Training in the Public Interest</i> , 52 YALE L.J. 203 (1943). |
| 451 | David F. Cavers, <i>A Critique of the Choice-of-Law Problem</i> , 47 HARV. L. REV. 173 (1933).  |
| 449 | Hugo L. Black, <i>The Bill of Rights</i> , 35 N.Y.U. L. REV. 865 (1960).  |
| 439 | Joseph Tussman & Jacobus tenBroek, <i>The Equal Protection of the Laws</i> , 37 CALIF. L. REV. 341 (1949).  |
| 434 | Lon L. Fuller, <i>Consideration and Form</i> , 41 COLUM. L. REV. 799 (1941).  |
| 420 | Roscoe Pound, <i>Mechanical Jurisprudence</i> , 8 COLUM. L. REV. 605 (1908).  |
| 415 | Abraham S. Goldstein, <i>The State and the Accused: Balance of Advantage in Criminal Procedure</i> , 69 YALE L.J. 1149 (1960).                            |

*Note:* These are the most-cited articles, based on the total number of citations in HeinOnline as of November 2011, that were published in 1960 or earlier and did not qualify for the all-time top 100 ranking. They probably would have qualified were it not for the smaller quantity of citation opportunities available in the early and mid-twentieth century. The column of numbers on the left is the total number of HeinOnline citations.

TABLE IV.  
MOST-CITED LAW REVIEW ARTICLES IN SELECTED SUBJECTS  
COMPILED BY FRED R. SHAPIRO

ANTITRUST LAW		
1.	636	Philip Areeda & Donald F. Turner, <i>Predatory Pricing and Related Practices under Section 2 of the Sherman Act</i> , 88 HARV. L. REV. 697 (1975).
2.	463	William M. Landes & Richard A. Posner, <i>Market Power in Antitrust Cases</i> , 94 HARV. L. REV. 937 (1981).
3.	451	Frank H. Easterbrook, <i>Limits of Antitrust</i> , 63 TEX. L. REV. 1 (1984).
4.	448	Donald F. Turner, <i>The Definition of Agreement under the Sherman Act: Conscious Parallelism and Refusals to Deal</i> , 75 HARV. L. REV. 655 (1962).
5.	402	Richard A. Posner, <i>The Chicago School of Antitrust Analysis</i> , 127 U. PA. L. REV. 925 (1979).
6.	365	Derek C. Bok, <i>Section 7 of the Clayton Act and the Merging of Law and Economics</i> , 74 HARV. L. REV. 226 (1960).
7.	362	Ward S. Bowman, Jr., <i>Tying Arrangements and the Leverage Problem</i> , 67 YALE L.J. 19 (1957).
8.	359	Robert H. Bork, <i>The Rule of Reason and the Per Se Concept: Price Fixing and Market Division II</i> , 75 YALE L.J. 373 (1966).
9.	349	Thomas G. Krattenmaker & Steven C. Salop, <i>Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power over Price</i> , 96 YALE L.J. 209 (1986).
10.	340	Robert H. Bork, <i>The Rule of Reason and the Per Se Concept: Price Fixing and Market Division</i> , 74 YALE L.J. 775 (1965).

CORPORATE AND SECURITIES LAW		
1.	1153	William L. Cary, <i>Federalism and Corporate Law: Reflections upon Delaware</i> , 83 YALE L.J. 663 (1974).
2.	893	Frank H. Easterbrook & Daniel R. Fischel, <i>The Proper Role of a Target's Management in Responding to a Tender Offer</i> , 94 HARV. L. REV. 1161 (1981).
3.	698	Ronald J. Gilson & Reinier H. Kraakman, <i>The Mechanisms of Market Efficiency</i> , 70 VA. L. REV. 549 (1984).
4.	519	Ralph K. Winter, Jr., <i>State Law, Shareholder Protection, and the Theory of the Corporation</i> , 6 J. LEGAL STUD. 251 (1977).
5.	501	E. Merrick Dodd, Jr., <i>For Whom Are Corporate Managers Trustees?</i> , 45 HARV. L. REV. 1145 (1932).
6.	471	Ronald J. Gilson, <i>A Structural Approach to Corporations: The Case Against Defensive Tactics in Tender Offers</i> , 33 STAN. L. REV. 819 (1981).
7.	432	Frank H. Easterbrook & Daniel R. Fischel, <i>Corporate Control Transactions</i> , 91 YALE L.J. 698 (1982).
(tie)	390	Janet Cooper Alexander, <i>Do the Merits Matter? A Study in Settlements in Securities Class Actions</i> , 43 STAN. L. REV. 497 (1991).
(tie)	390	Margaret M. Blair & Lynn A. Stout, <i>A Team Production Theory of Corporate Law</i> , 85 VA. L. REV. 247 (1999).
10.	375	Martin Lipton, <i>Takeover Bids in the Target's Boardroom</i> , 35 BUS. LAW. 101 (1979).

FAMILY LAW		
1.	1071	Robert H. Mnookin & Lewis Kornhauser, <i>Bargaining in the Shadow of the Law: The Case of Divorce</i> , 88 YALE L.J. 950 (1979).
2.	726	Frances E. Olsen, <i>The Family and the Market: A Study of Ideology and Legal Reform</i> , 96 HARV. L. REV. 1497 (1983).
3.	605	Julian W. Mack, <i>The Juvenile Court</i> , 23 HARV. L. REV. 104 (1909).
4.	527	Martha R. Mahoney, <i>Legal Images of Battered Women: Redefining the Issue of Separation</i> , 90 MICH. L. REV. 1 (1991).
5.	377	Reva B. Siegel, <i>"The Rule of Love": Wife Beating as Prerogative and Privacy</i> , 105 YALE L.J. 2117 (1996).
6.	337	Nancy D. Polikoff, <i>This Child Does Have Two Mothers: Redefining Parenthood to Meet the Needs of Children in Lesbian-Mother and Other Nontraditional Families</i> , 78 GEO. L. J. 459 (1990).
7.	326	Katharine T. Bartlett, <i>Rethinking Parenthood as an Exclusive Status: The Need for Legal Alternatives When the Premise of the Nuclear Family Has Failed</i> , 70 VA. L. REV. 879 (1984).
8.	289	Michael Wald, <i>State Intervention on Behalf of "Neglected" Children: A Search for Realistic Standards</i> , 27 STAN. L. REV. 985 (1975).
9.	272	Martha Fineman, <i>Dominant Discourse, Professional Language, and Legal Change in Child Custody Decisionmaking</i> , 101 HARV. L. REV. 727 (1988).

<b>FAMILY LAW</b>		
10.	253	David L. Chambers, <i>Rethinking the Substantive Rules for Custody Disputes in Divorce</i> , 83 MICH. L. REV. 477 (1984).



<b>INTELLECTUAL PROPERTY</b>		
1.	622	Frank I. Schechter, <i>The Rational Basis of Trademark Protection</i> , 40 HARV. L. REV. 813 (1927).
2.	547	David R. Johnson & David Post, <i>Law and Border—The Rise of Law in Cyberspace</i> , 48 STAN. L. REV. 1367 (1996).
3.	532	Stephen Breyer, <i>The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs</i> , 84 HARV. L. REV. 281 (1970).
4.	515	William M. Landes & Richard A. Posner, <i>An Economic Analysis of Copyright Law</i> , 18 J. LEGAL STUD. 325 (1989).
5.	512	Pierre N. Leval, <i>Toward a Fair Use Standard</i> , 103 HARV. L. REV. 1105 (1990).
6.	497	Edmund W. Kitch, <i>The Nature and Function of the Patent System</i> , 20 J.L. & ECON. 265 (1977).
7.	486	Wendy J. Gordon, <i>Fair Use as Market Failure: A Structural and Economic Analysis of the Betamax Case and Its Predecessors</i> , 82 COLUM. L. REV. 1600 (1982).
8.	472	Robert P. Merges & Richard R. Nelson, <i>On the Complex Economics of Patent Scope</i> , 90 COLUM. L. REV. 839 (1990).
9.	387	Jessica Litman, <i>The Public Domain</i> , 39 EMORY L.J. 965 (1990).
10. (tie)	351	Yochai Benkler, <i>Free as the Air to Common Use: First Amendment Constraints on Enclosure of the Public Domain</i> , 74 N.Y.U. L. REV. 354 (1999).
10. (tie)	351	Wendy J. Gordon, <i>A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property</i> , 102 YALE L.J. 1533 (1993).



<b>INTERNATIONAL LAW</b>		
1.	471	Curtis A. Bradley & Jack L. Goldsmith, <i>Customary International Law as Federal Common Law: A Critique of the Modern Position</i> , 110 HARV. L. REV. 815 (1997).
2.	428	Harold Hongju Koh, <i>Why Do Nations Obey International Law?</i> , 106 YALE L.J. 2599 (1997).
3.	320	Diane F. Orentlicher, <i>Settling Accounts: The Duty to Prosecute Human Rights Violations of a Prior Regime</i> , 100 YALE L.J. 2537 (1991).
4.	319	Louis B. Sohn, <i>The New International Law: Protection of the Rights of Individuals Rather Than States</i> , 32 AM. U. L. REV. 1 (1982).
5.	298	J.H.H. Weiler, <i>The Transformation of Europe</i> , 100 YALE L.J. 2403 (1991).
6.	294	Laurence R. Helfer & Anne-Marie Slaughter, <i>Toward a Theory of Effective Supranational Adjudication</i> , 107 YALE L.J. 273 (1997).

INTERNATIONAL LAW		
7.	280	Myres S. McDougal & Asher Lans, <i>Treaties and Congressional-Executive or Presidential Agreements: Interchangeable Instruments of National Policy</i> , 54 YALE L.J. 181 (1945).
8.	277	Andreas F. Lowenfeld & Allan I. Mendelsohn, <i>The United States and the Warsaw Convention</i> , 80 HARV. L. REV. 497 (1967).
9.	276	Oscar Schachter, <i>The Right of States to Use Armed Force</i> , 82 MICH. L. REV. 1620 (1984).
10.	273	David Cole, <i>Enemy Aliens</i> , 54 STAN. L. REV. 953 (2002).

LABOR AND EMPLOYMENT LAW		
1.	570	Lawrence E. Blades, <i>Employment at Will vs. Individual Freedom: On Limiting the Abusive Exercise of Employer Power</i> , 67 COLUM. L. REV. 1404 (1967).
2.	455	Paul Weiler, <i>Promises to Keep: Securing Workers' Rights to Self-Organization Under the NLRA</i> , 96 HARV. L. REV. 1769 (1983).
3.	453	Karl E. Klare, <i>Judicial Deradicalization of the Wagner Act and the Origins of Modern Legal Consciousness, 1937-1941</i> , 62 MINN. L. REV. 265 (1978).
4.	452	Clyde W. Summers, <i>Individual Protection Against Unjust Dismissal: Time for a Statute</i> , 62 VA. L. REV. 481 (1976).
5.	346	Kathryn Abrams, <i>Gender Discrimination and the Transformation of Workplace Norms</i> , 42 VAND. L. REV. 1183 (1989).
6.	336	Harry Shulman, <i>Reason, Contract, and Law in Labor Relations</i> , 68 HARV. L. REV. 999 (1955).
7.	319	Richard A. Epstein, <i>In Defense of the Contract at Will</i> , 51 U. CHI. L. REV. 947 (1984).
8.	313	Archibald Cox, <i>The Duty to Bargain in Good Faith</i> , 71 HARV. L. REV. 1401 (1958).
9.	307	J. Peter Shapiro & James F. Tune, <i>Implied Contract Rights to Job Security</i> , 26 STAN. L. REV. 335 (1974).
10.	306	Susan Sturm, <i>Second Generation Employment Discrimination: A Structural Approach</i> , 101 COLUM. L. REV. 458 (2001).

LEGAL ETHICS AND LEGAL PROFESSION		
1.	1137	Owen M. Fiss, <i>Against Settlement</i> , 93 YALE L.J. 1073 (1984).
2.	677	Harry T. Edwards, <i>The Growing Disjunction between Legal Education and the Legal Profession</i> , 91 MICH. L. REV. 34 (1992).
3.	594	Judith Resnik, <i>Managerial Judges</i> , 96 HARV. L. REV. 374 (1982).
4.	561	Charles Fried, <i>The Lawyer as Friend: The Moral Foundations of the Lawyer-Client Relation</i> , 85 YALE L.J. 1060 (1976).
5.	483	Harold D. Lasswell & Myres S. McDougal, <i>Legal Education and Public Policy: Professional Training in the Public Interest</i> , 52 YALE L.J. 203 (1943).

6.	461	Monroe H. Freedman, <i>Professional Responsibility of the Criminal Defense Lawyer: The Three Hardest Questions</i> , 64 MICH. L. REV. 1469 (1966).
7.	425	William H. Simon, <i>Ethical Discretion in Lawyering</i> , 101 HARV. L. REV. 1083 (1988).
8.	386	William H. Simon, <i>The Ideology of Advocacy: Procedural Justice and Professional Ethics</i> , 1978 WIS. L. REV. 29 (1978).
9.	360	Robert W. Gordon, <i>The Independence of Lawyers</i> , 68 B.U. L. REV. 1 (1988).
10.	351	Deborah L. Rhode, <i>Ethical Perspectives on Legal Practice</i> , 37 STAN. L. REV. 589 (1985).

*Note:* The column of numbers on the left is the ranking within the subject area. The second column is the total number of citations in HeinOnline as of November 2011.

TABLE V.  
BREAKDOWN OF MOST-CITED ARTICLES BY LAW REVIEWS AND LAW  
SCHOOLS COMPILED BY FRED R. SHAPIRO

All-Time List (Law Reviews)	
<i>Harvard Law Review</i>	35
<i>Yale Law Journal</i>	18
<i>Stanford Law Review</i>	10
<i>Columbia Law Review</i>	5
<i>Michigan Law Review</i>	4

Recent-Articles List (Law Reviews)	
<i>Harvard Law Review</i>	18
<i>Yale Law Journal</i>	17
<i>Stanford Law Review</i>	11
<i>Columbia Law Review</i>	9
<i>Michigan Law Review</i>	9

All-Time List (Authors' Law School Faculty Status at Time of Publication)	
Harvard	16.3
Yale	15.5
Stanford	8.5
University of Chicago	4.8
Columbia	4

Recent-Articles List (Authors' Law School Faculty Status at Time of Publication)	
Yale	16.3
Harvard	10.3
University of Chicago	9.3
UCLA	6
UC—Berkeley	5
Columbia	5
NYU	5

All-Time List (Authors' Law School Faculty Status, "Where Are They Now")	
Harvard	11.3
Yale	9.3
NYU	3.5
Georgetown	3
University of Michigan	3
University of Wisconsin	3

Recent-Articles List (Authors' Law School Faculty Status, "Where Are They Now")	
Yale	19.7
Harvard	15.8
Stanford	9.5
UCLA	6.5
Columbia	5.5

All-Time List (Authors' Law Degrees)	
Harvard	35.2
Yale	22.5
University of Chicago	8.5
Columbia	5
Stanford	4.5

Recent-Articles List (Authors' Law Degrees)	
Harvard	29.8
Yale	25.3
UC—Berkeley	10
University of Virginia	5
University of Chicago	3.5

*Note:* For faculty numbers, multiple articles by an author count multiple times. Coauthors divide fractional credit; two coauthors, for example, each result in 0.5 points for their law school. In the “Where Are They Now” tabulation, emeritus professors count for their school unless they have a primary position elsewhere. Nonprofessorial appointments and non-law school appointments are not counted.

### III. ANALYSIS (SHAPIRO)

What can we learn from the tables above? The imperfections of citation-counts as proxies for quality or even influence are such that citation-counts are at most only suggestive of landmark status for certain publications, authors, institutions, and schools of thought. One landmark status that is clear, since the article also partially provided the basis for its author receiving a Nobel Prize, belongs to the number one all-time article in my rankings, R.H. Coase’s *The Problem of Social Cost*.<sup>26</sup> This paper, a source of the celebrated “Coase Theorem,” is lifted above others with law citation-counts similarly in the thousands by the fact that it also has thousands of social science citations. Given the superior citation tools now available, the frequent assertion that *The Problem of Social Cost* is the most-cited article both in law and in economics can finally be answered. In reality, though the Coase article has 1,345 citations in economics journals according to Web of Science, this number is nowhere near the leading total of 3,386 economics citations for Robert F. Engle and C.W.J. Granger’s article *Co-Integration and Error Correction: Representation, Estimation, and Testing*.<sup>27</sup>

Following Coase are two venerable classics that are now, for the first time, being given full credit for older citations made to them. Samuel D. Warren and Louis D. Brandeis’s *The Right to Privacy*<sup>28</sup> is commonly regarded as the most influential of all law review articles, virtually originating the tort of invasion of privacy. Oliver Wendell Holmes, Jr.’s *The Path of the Law*<sup>29</sup> is a work of towering importance both jurisprudentially and literarily. *The Yale Book of Quotations* includes six passages from it.<sup>30</sup>

26. R.H. Coase, *supra* note 16; *see supra* Table 1.

27. Robert F. Engle & C.W.J. Granger, *Co-Integration and Error Correction: Representation, Estimation and Testing*, 55 *ECONOMETRICA* 251 (1987).

28. Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 *HARV. L. REV.* 193 (1890).

29. O.W. Holmes, *The Path of the Law*, 10 *HARV. L. REV.* 457 (1897).

30. *THE YALE BOOK OF QUOTATIONS* 366 (Fred R. Shapiro ed., 2006).

### A. *The Effect of the Social Sciences on Legal Citation Analysis*

Although the rationale behind including Web of Science non-law citations in the citation totals on the all-time list was that law is an interdisciplinary field, I found that the interdisciplinarity is in fact fairly one-sided. Law cites the social sciences, but it does not get cited very much by the social sciences. As a result, the addition of Web of Science data did not change the all-time list appreciably.

The main result from adding in social science citations was the elevation of Coase's *The Problem of Social Cost* from fourth place in a ranking based solely on HeinOnline law citations (behind Warren and Brandeis, Holmes, and Gerald Gunther<sup>31</sup>) to first place in the combined ranking. *The Problem of Social Cost* had 2,484 social science citations in Web of Science. The only other legal articles with large numbers of social science citations were Stewart Macaulay, *Non-Contractual Relations in Business: A Preliminary Study*<sup>32</sup> (639); Henry G. Manne, *Mergers and the Market for Corporate Control*<sup>33</sup> (414); Henry B. Hansmann, *The Role of Nonprofit Enterprise*<sup>34</sup> (379); Richard A. Posner, *Theories of Economic Regulation*<sup>35</sup> (379); Samuel D. Warren and Louis D. Brandeis, *The Right to Privacy*<sup>36</sup> (347); Ian R. Macneil, *Contracts: Adjustment of Long-Term Economic Relations under Classical, Neoclassical, and Relational Contract Law*<sup>37</sup> (345); Marc Galanter, *Why the Haves Come Out Ahead: Speculations on the Limits of Legal Change*<sup>38</sup> (263); and Kimberlé Crenshaw, *Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color*<sup>39</sup> (240).

### B. *Top Authors, Top Law Reviews, and Top Schools*

Looking at the all-time top 100 list, we see multiple appearances for Owen M. Fiss and Frank I. Michelman (four each); Lon L. Fuller, William L. Prosser, and Cass R. Sunstein (three each); and Anthony G. Amsterdam, Paul Brest, Guido Calabresi, Kimberlé Crenshaw, John Hart Ely, Henry J. Friendly, Marc Galanter, Henry M. Hart, Jr., Mari J. Matsuda, Margaret Jane

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31. Gerald Gunther, *The Supreme Court, 1971 Term—Foreword: In Search of Evolving Doctrine on a Changing Court: A Model for a Newer Equal Protection*, 86 HARV. L. REV. 1 (1972).

32. Macaulay, *supra* note 19.

33. Manne, *supra* note 20.

34. Henry B. Hansmann, *The Role of Nonprofit Enterprise*, 89 YALE L.J. 835 (1980). The Web of Science shows that this is the most-cited law review article (defining “law review article” strictly, excluding articles in “law and” journals such as the *Journal of Law and Economics*) in the entire nonlegal social science literature.

35. Posner, *supra* note 21.

36. Warren & Brandeis, *supra* note 28.

37. Ian R. Macneil, *Contracts: Adjustment of Long-Term Economic Relations Under Classical, Neoclassical, and Relational Contract Law*, 72 NW. U. L. REV. 854 (1978).

38. Galanter, *supra* note 17.

39. Kimberlé Crenshaw, *Mapping the Margins: Intersectionality, Identity Politics, and Violence Against Women of Color*, 43 STAN. L. REV. 1241 (1991).

Radin, Joseph L. Sax, and Herbert Wechsler (two each). If the older-articles list (Table III) is merged with the top 100, then Fuller picks up a fourth supercited article, and Charles L. Black, Jr., and Karl N. Llewellyn each pick up a second one.

On the all-time top 100 list, the *Harvard Law Review* dominates law reviews in number of articles with 35 of its articles appearing on the list (including 5 of the top 6 and 10 of the top 16), as compared to the *Yale Law Journal*'s 18 and the *Stanford Law Review*'s 10. No less than 11 of those 100 articles were published in the prestigious series of the annual Forewords to the Supreme Court Term issue of the *Harvard Law Review*. Analyzing the all-time articles by which law schools the authors were faculty members of at the time of publication, we find Harvard narrowly ahead of Yale, 16.3 to 15.5 (multiple articles by an author count multiple times and coauthors divide fractional credit).

On the "Where Are They Now" breakdown, many of the authors on the all-time list are deceased but, for current and emeritus law professors, Harvard is again first over Yale, 11.3 to 9.3. Harvard's traditional prominence in legal education is also reflected in a breakdown of all-time authors by law degrees. Here, Harvard has 35.2 and Yale has 22.5.

Data from the all-time ranking sheds light on schools' contributions to legal scholarship over a long historical span. Analysis of the 100 articles on the recent-articles list (Table IV), tables of the five most-cited papers published each year from 1990 to 2009, speaks more to the impact of scholarship produced in the current era. Here we see a more diffuse distribution of highly cited articles. The *Harvard Law Review*'s precedence is less overwhelming than on the all-time roster. Of the most recent 100 articles, 18 were published in the *Harvard Law Review*, 17 in the *Yale Law Journal*, 11 in the *Stanford Law Review*, and 9 each in the *Columbia Law Review* and the *Michigan Law Review*.

For law school faculty status at the time of publication, Yale has a significant lead over Harvard on the recent-articles list, with 16.3 authors as compared to Harvard's 10.3. Slightly behind Harvard, the University of Chicago has 9.3. The University of California–Los Angeles ("UCLA") takes a surprising fourth place with 6 authors. Looking at "Where Are They Now," Yale is at the top with 19.7 authors, followed by Harvard at 15.8, Stanford at 9.5, and UCLA, again fourth, at 6.5.<sup>40</sup>

Even Harvard's lateral hiring of citation superstar Cass R. Sunstein as well as Lawrence Lessig, Yochai Benkler, and Jack L. Goldsmith has not resulted in a lead in the "Where Are They Now" tabulation. Harvard does take first place in law degrees of the recent-articles authors with a total of 29.8 authors. Yale's number is 25.3, and Berkeley's is 10.

Most of the University of California–Berkeley ("Berkeley")'s 10 law degrees, like most of Stanford's 9.5 "Where Are They Now" points, are attributable to a single scholar, Mark A. Lemley. Lemley authored or

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40. See *supra* note to Table V for clarification of methodology used to calculate faculty numbers.



coauthored an astounding 9 of the top 100 most-cited recent articles. This showing is perhaps even more remarkable in light of the fact that his area is intellectual property, which has, at least until the 1990s, been a “small literature” field without much of a presence among citation-classic articles.

After Lemley, Sunstein has six papers on the recent-articles list. Sunstein was the most-cited younger scholar and fifteenth among all legal authors in my 2000 study of *The Most-Cited Legal Scholars*<sup>41</sup>; if that study were repeated today, he would probably rank behind only Richard A. Posner.<sup>42</sup> Akhil Reed Amar is third on the recent-articles list with four, followed by William N. Eskridge, Jr., Robert C. Post, and Reva B. Siegel (three each); and Stephen M. Bainbridge, Lucian Arye Bebchuk, Yochai Benkler, Curtis A. Bradley, John C. Coffee, Jr., Jack L. Goldsmith, Dan M. Kahan, Harold H. Koh, Lawrence Lessig, and A. Benjamin Spencer (two each).

This roll call of names and the one for the all-time list are, of course, incomplete as pantheons of the highest-impact legal scholars. Scholarship in book form is not reflected, excluding important book writers such as Ronald Dworkin and Lawrence M. Friedman (or, from an older period, Joseph Story and John Henry Wigmore). Books even depress the citation totals for article writers, in the sense that some articles’ totals might be truncated because they are turned into books, which may then be cited instead of the articles. For example, Akhil Reed Amar’s article, *The Bill of Rights as a Constitution*,<sup>43</sup> became the basis for the first half of Amar’s book, *The Bill of Rights: Creation and Reconstruction*.<sup>44</sup> As noted earlier, the subjects about which a scholar writes may also have a substantial effect on his or her citation rate.

### C. Reflections

In my 1996 study of the most-cited law review articles, I wrote that “[a]ll in all, looking at the numbers for law reviews, authors’ affiliations, and authors’ law degrees, Harvard, Yale, and Chicago clearly form a triumvirate dominating legal scholarship, or at least that portion of it published in article form.”<sup>45</sup> In the present study, the University of Chicago Law School is less clearly part of a triumvirate, although it is still a major scholarly force<sup>46</sup> and, like Yale, would make a stronger showing on a per-capita analy-

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41. Fred R. Shapiro, *The Most-Cited Legal Scholars*, 29 J. LEGAL STUD. 409, 424 tbl.6 (2000).

42. *Id.* at 424, 426. As of 2000, Judge Posner was the most often-cited legal scholar of all time with 7,981 citations, nearly 50 percent more than anyone else.

43. Akhil Reed Amar, *The Bill of Rights as a Constitution*, 100 YALE L.J. 1131 (1991).

44. AKHIL REED AMAR, *THE BILL OF RIGHTS: CREATION AND RECONSTRUCTION* (1998). My studies of the most-cited legal scholars, Shapiro, *supra* note 41, and the most-cited post-1978 legal books, Fred R. Shapiro, *The Most-Cited Legal Books Published Since 1978*, 29 J. LEGAL STUD. 397 (2000), did go beyond the articles-only focus.

45. Shapiro, *The Most-Cited Law Review Articles Revisited*, *supra* note 1, at 765.

46. Brian Leiter’s ranking of the “top 25 law faculties in scholarly impact, 2005–2009,” has Chicago third behind Yale and Harvard and significantly ahead of fourth-place Stanford. *Top 25 Law Faculties in Scholarly Impact, 2005–2009*, BRIAN LEITER’S LAW SCHOOL RANK-

sis in light of Harvard's much larger alumni population. Harvard and Yale could now be seen as a duopoly, with Harvard preeminent on the all-time list and Yale foremost on the recent-articles list. One explanation for the University of Chicago's more modest presence on these latest most-cited articles lists might be the moves of Richard A. Posner and Frank H. Easterbrook to the judiciary and Cass R. Sunstein to Harvard.

Another explanation might be a hypothetical decline in the law and economics movement with which Chicago has been so closely associated. There is no reason, however, to believe that such a decline has occurred. In the late 1990s and 2000s, law and economics articles have been plentiful among the citation elite. Christine Jolls, Cass R. Sunstein, and Richard Thaler's *A Behavioral Approach to Law and Economics*<sup>47</sup> has more citations than any other paper of the last twenty years, including articles with a head start of up to seven years. Of the several movements of the late twentieth century that rebelled against the doctrinal traditions of law as an autonomous discipline, law and economics is the one that most obviously became "normal science,"<sup>48</sup> being integrated into the work of a wide range of mainstream scholars.

In contrast to the staying power of law and economics, the critical legal studies ("CLS") and critical race theory ("CRT") movements have faded in acceptance. My 1996 citation study focused on the phenomenon, evident at the time, that the "outsiders" of CLS and CRT had become insiders, at least in the world of law review publication and citation.<sup>49</sup> Enumerations of citation leaders in the late 1990s and early 2000s were strongly dominated by outsider movements. I did state, however, that "it may be that I merely happened to end my study at a time when a short-term wave was cresting,"<sup>50</sup> and this is what appears to be the case.

Feminist jurisprudence undoubtedly has more continuing vitality than the two other outsider movements noted above, but this is not clearly reflected in the table of most-cited recent articles. The demographic category of female authors, which does not precisely correspond to the political category of feminist jurists, has 24.8 articles (again with fractional credit given to coauthors) on the recent-articles list of 100 papers. This is, of course, a much higher total than would be the case for any earlier time period.

Highly cited articles can be classified not only by intellectual or political approach but also by subject. The subject of intellectual property, traditionally one of the "small literatures," has been on the rise over the last fifteen years. Mark A. Lemley has figured in the authorship of most of the heavily cited intellectual property papers, but this field's ascendance is more

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INGS, [http://www.leiterrankings.com/faculty/2010\\_scholarlyimpact.shtml](http://www.leiterrankings.com/faculty/2010_scholarlyimpact.shtml) (last visited Dec. 24, 2011).

47. Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471 (1998).

48. THOMAS S. KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (3d ed. 1996).

49. Shapiro, *The Most-Cited Law Review Articles Revisited*, *supra* note 1, at 757–59.

50. *Id.* at 758.

attributable to technological developments than to personal ones. No other subject trend emerges strongly from the lineup of most-cited recent articles.

#### IV. COMPARING SHAPIRO'S LISTS WITH MODERN METHODS (PEARSE)

##### *A. The Rise of Alternative Methods and Metrics in Legal Scholarship*

Since Shapiro's last article in 1996, and in addition to enhancements to HeinOnline and Web of Science, alternative methods for calculating the "impact" of legal scholarship have undeniably proliferated. This is particularly true as the services available for discovering full-text content have grown. Permutations abound that make various calculations possible, including the ability to create one's own citators by running searches in full-text databases with the proper search string and well-formatted text. In addition, some of these services provide overlays of graphical representations to help visualize citation patterns.

Limitations, unreliability, and lack of definition in the source content, however, make it difficult to hail any one of these services as a "superior" benchmark to the bibliometric methodology used for this Article's lists, particularly when focusing only on articles. The scope of this Part and the limitations of some of these services do not permit a full study of data and rankings in each of these services. However, selected comparisons of these services using the same citations referenced in Shapiro's lists are included to illustrate aspects of these tools and to give some sense of how these citations might fare under these various methods and metrics.<sup>51</sup>

While it is probably inaccurate to state that any of these alternative metrics have supplanted traditional citation analysis in legal academia, their significance continues to grow, and they enable law schools to view scholarly impact in ways that traditional citation analysis does not. Newer metrics also potentially enable newer scholars, non-U.S. scholars and non-academic authors to garner more attention than they do in traditional citation studies in which longer-standing scholarship, scholars, and journals tend to dominate.

##### *B. Alternative Methods for Tracking References in Published Works*

Free search engines and commercial databases have harnessed data aggregated or indexed for their research resources to develop tools to track the citation of scholarly work. These tools tend to be either overly broad and random or too narrow in their source data to serve as definitive reference points for citation impact. Some use "citation parser software" and data-mining techniques that continue to improve but that have their limitations. They are best thought of as tools for broader "grab and go" or "quick and

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51. The data derived from these comparisons appears in Tables VI–XI, which can be found on *First Impressions*, the online companion to the *Michigan Law Review*, and is available at [http://www.michiganlawreview.org/assets/110/8/shapiropearse\\_supplementaltables.pdf](http://www.michiganlawreview.org/assets/110/8/shapiropearse_supplementaltables.pdf).

dirty” citation counts. In contrast, services like HeinOnline’s ScholarCheck and Web of Science<sup>52</sup> might be thought of as “slow and steady.” They deal with much more controlled and definitive data and tend to use more quality control.

On the search engine side, both Google and Microsoft have developed academic research tools with features indicating the numbers of times that articles listed in their search results have been cited in other items or sources also indexed by their academic search engines. Both services have flawed metadata but allow users to create profiles and help correct information associated with their profiles.<sup>53</sup> In fact, these services have developed sophisticated profiling tools that allow a researcher to check on the performance of his scholarship. While the added overlays and visualizations are impressive, the metadata is still too varied to look at these services as a complete and accurate picture of researchers’ work.

### 1. Comparison of Google Scholar’s Results

Over the past few years, Google Scholar has emerged as a rich source for searching full-text law and general social science journal content as publishers, vendors (including HeinOnline), and repositories have had their data indexed for discoverability. Google Scholar pulls from a broader scope of source data than HeinOnline and Social Science Citation Index, including items in Google Books and cases from its free case law service. Google Scholar actually offers “citation counts” for its citations, indicating how many times a particular item has been referenced or cited in other sources covered by Google Scholar.<sup>54</sup> The service also provides authors with a Google Citations Author profile.

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52. In addition to the Web of Science (Thomson) used by Shapiro, Elsevier offers a competitor product called Scopus. SCOPUS, <http://www.scopus.com> (last visited Feb. 9, 2012). By comparison, its law coverage has not evolved beyond the scope of Web of Science. *See Content Selection*, SCIVERSE, <http://www.info.sciverse.com/scopus/scopus-in-detail/content-selection> (last visited Feb. 9, 2012). Law review titles are highly selective and only go back as far as the mid-1970s and sometimes as recently as the mid-1990s. As of January 10, 2011, many of the top 10 articles in Shapiro’s 100 most-cited law review articles of all time are not included, most likely due to publication date. *See Social Sciences Citation Index*, THOMSON REUTERS, [http://thomsonreuters.com/products\\_services/science/science\\_products/a-z/social\\_sciences\\_citation\\_index/](http://thomsonreuters.com/products_services/science/science_products/a-z/social_sciences_citation_index/) (last visited Feb. 9, 2012) (explaining the coverage in Web of Science, specifically the Social Science Citation Index). Both Thomson and Elsevier have also released products for universities to purchase their bibliographic data with related tools to mine and report on faculty and institutional productivity.

53. Brian Kelley, *Google Scholar Citations and Metadata Quality*, UK WEB FOCUS (Nov. 28, 2011, 9:26 AM), <http://ukwebfocus.wordpress.com/2011/11/28/google-scholar-citations-and-metadata-quality/>. There has also been an independently launched project called ORCID, which is a central registry for authors to create a unique identifier and confirm their publications. *See* ORCID, <http://about.orcid.org> (last visited Feb. 26, 2012).

54. Anne-Wil K. Harzing offers Publish or Perish Software with Google Scholar data for authors to compile their own metrics. HARZING.COM, <http://www.harzing.com/pop.htm> (last visited Feb. 9, 2012). *See also* Ann-Wil K. Harzing & Ron van der Wal, *Google Scholar*

Problems with the metadata and the variety and instability of source data used, however, make it difficult to use Google Scholar citation counts in a “pure” citation analysis.<sup>55</sup> The service often provides source data for the same article from multiple sources (e.g., JSTOR, HeinOnline, publisher platform, et cetera), including reprints of articles in books, and does not always “deduplicate” the citing references.<sup>56</sup> To complicate any distinction between books and articles, there are many publications in Google Books that are essentially journals. Problems with disambiguation of author data and instability of citing references also complicate meaningful analysis of the results.<sup>57</sup>

While it is difficult to make a direct comparison with Shapiro’s lists due to the variability in the metadata, Table VI<sup>58</sup> provides citation counts for the top ten articles in his top 100 list from Table I. Where possible, an estimate has been given of how many of the citations are from Google Books<sup>59</sup> and how many are from cases<sup>60</sup> to give a rough estimate of the relevant distribu-

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as a New Source for Citation Analysis, 8 ETHICS SCI. & ENVTL. POL. 61 (2008), available at <http://www.int-res.com/abstracts/ese/v8/n1/p61-73/>.

55. See Péter Jascó, *Google Scholar Duped and Deduped—the Aura of “Robometrics”*, 35 ONLINE INFO. REV. 154 (2011), available at <http://emeraldinsight.com/journals.htm?articleid=1907378>; Joeran Beel & Bela Gipp, *Academic Search Engine Spam and Google Scholar’s Resilience Against It*, J. ELECTRONIC PUB. (Dec. 2010), <http://dx.doi.org/10.3998/3336451.0013.305>. The same article often comes from different sources (e.g., HeinOnline and JSTOR). While these various sources for the same document are frequently “clustered” into a single entry, they do occasionally appear as separate entries.

56. Marcie Baranich, *HeinOnline or Google Scholar? Why You Should Start Your Research in HeinOnline First*, HEINONLINE BLOG (Nov. 24, 2009), <http://heinonline.blogspot.com/2009/11/heinonline-or-google-scholar-why-you.html>. It is very difficult to get information from Google about its source data for Google Scholar and Google Citations. Links are sometimes identified as different versions of the same content. Although Google does provide some explanation of its substantive and technical criteria, it is very difficult to discern more detailed information about the existing scope of source data for Google Scholar and Google Citations. See Google Scholar Citations Help, GOOGLE SCHOLAR, <http://scholar.google.com/intl/en/scholar/citations.html> (last visited Apr. 22, 2012); Inclusion Guidelines for Webmasters, GOOGLE SCHOLAR, <http://scholar.google.com/intl/en/scholar/inclusion.html> (last visited Apr. 22, 2012).

57. Some of these problems might be resolved by crowd-sourcing and author participation in Google Citations Author profiles, but that depends upon whether authors and their institutions adopt this source. See *Google Scholar Citations*, GOOGLE SCHOLAR, <http://scholar.google.com/intl/en/scholar/citations.html> (last visited Feb. 9, 2012).

58. Shapiro, *supra* note 51, at Table VI; see also *id.* at Tables VII–XI.

59. This was generated by searching the cited-references results for “books.google.com.” That provides only a rough estimate because some books are actually journals, while others are reprints of the journal article.

60. A search was run for the author and exact name of the article as required terms in “legal opinions from all courts” in the Advanced Search in Google Scholar. In some cases, a search for the journal publication name and its *Bluebook* abbreviation was used. These results are inherently inaccurate as even a cursory review indicated that searching for required terms actually yielded cases that did not seem to mention the article. This could be a reflection of recent changes in Google Advanced searching. See *Google Advanced Search Showdown*, SEARCH ENGINE SHOWDOWN, [http://www.searchengineshowdown.com/blog/2011/12/google\\_advanced\\_showdown.shtml](http://www.searchengineshowdown.com/blog/2011/12/google_advanced_showdown.shtml) (last visited Feb. 9, 2012).

tion of articles versus books or cases (although this distinction is imperfect as even “net” citations are not always articles). When Google Scholar returned multiple entries or copies of the same article, the most reliable (identifiable) source (e.g., HeinOnline, JSTOR) with the most citations was used.

Interestingly, with some slight variations, the citation counts mirror the relevant ranking order of Shapiro’s lists. One may also note the citation-count differences among HeinOnline, Web of Science and Google Scholar. Google Scholar outnumbers the others two- or threefold. A certain amount of the disparity might be due to differences in the number of citing sources, but when one looks at those references, the authority or singularity of the citing reference is often unclear or duplicative and has little meaning.

## 2. Comparison of Microsoft Academic Search’s Results

Recently, Microsoft Academic Search launched in beta.<sup>61</sup> Somewhat similarly to Google Scholar, this service is still very much in development, and the source of all of its data is unclear. Some initial searching indicates that there is a poor representation of law-school law reviews. Like Google Scholar, Microsoft Academic Search has similar metadata issues and allows authors to claim their profiles to assist in clarifying their data. It also provides “top” authors in fields (as granular as “law and criminology” in “Social Science” for all time or for the past five or ten years) comparisons between organizations and allows metrics to be generated by H-Index (i.e., Hirsch Index), G-Index, or citation.<sup>62</sup>

In a search of selected (top 10) citations in Shapiro’s lists, only 2 appeared in the publications in Microsoft Academic Search, even when other works by the authors were available.<sup>63</sup> In a search of a random sample of 10 of the more recent titles from Shapiro’s recent-articles list (using the data in Excel to generate random numbers), only one article appeared and the

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61. MICROSOFT ACADEMIC SEARCH, <http://academic.research.microsoft.com> (last visited Feb. 9, 2012).

62. The most granular topic listed is “law and criminology” in “Social Science.” As of January 11, 2011, Alex R. Piquero is listed as the top author over all years in that category by all indices (by H-Index, G-Index and citations). The H-Index is defined as “A scientist has index  $h$  if  $h$  of his/her  $N_p$  papers have at least  $h$  citations each, and the other ( $N_p-h$ ) papers have no more than  $h$  citations each” to measure the cumulative impact of all of the scientist’s research. Anne Wil-Harzing, *Reflections on the H-Index*, HARZING.COM (Apr. 23, 2008), [http://www.harzing.com/pop\\_hindex.htm](http://www.harzing.com/pop_hindex.htm). The G-Index is defined as “[Given a set of articles] ranked in decreasing order of the number of citations that they received, the  $g$ -index is the (unique) largest number such that the top  $g$  articles received (together) at least  $g^2$  citations.” *Id.* The H-Index is more commonly used in the sciences and for overall author performance, but there have been attempts to apply it to individual papers. See Andras Shubert, *Using the H-Index for Assessing Single Publications*, 78 SCIENTOMETRICS 559 (2009); but see Lutz Bornmann, Hermann Schier, Werner Marx & Hans-Dieter Daniel, *Does the H Index For Assessing Single Publications Really Work?*, 89 SCIENTOMETRICS 835 (2011) (questioning application of the H-Index to single publications in chemistry).

63. Shapiro, *supra* note 51, at Table VI. The search was last run on January 6, 2012.

source data was the Social Science Research Network (“SSRN”).<sup>64</sup> Lastly, a search of citations in the all-time top 100 list from the peer-reviewed law and social science journals yielded better results.<sup>65</sup> One might draw the conclusion that while articles from the peer-reviewed social science journals and newer articles on SSRN are well represented, this service probably does not yet have the appropriate scope of source content to serve as a proper representation of legal-scholarship citation patterns. There were also many issues with articles being attributed to a different person with the same name.

*C. Rise in Database “Cited by” (or “Times Cited in Database”) Features*

Commercial research databases and publisher platforms for journals have also begun to serve as additional sources for citations.<sup>66</sup> Many have begun adding a “cited by” (or “times cited in database”) feature and sometimes a “most cited” feature within the confines of their content. These references are usually built only on data (full-text or bibliographies) available to the vendor and are thus often limited in title scope and date coverage, posing the opposite problem of Google Scholar’s access to an overwhelming amount of data. By comparison, these services provide much more control over certain metadata elements such as author name, and they are much more respectful of versions and citation counts things that might be reprints of the original work cited. Nevertheless, while useful for developing some general impressions of the impact of an article, the limited and random scope of the citing reference services usually makes any meaningful analysis difficult.

Various searches were performed to get a sense of how the citations in Shapiro’s lists were represented in a selection of these services.<sup>67</sup> The num-

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64. SOCIAL SCIENCE RESEARCH NETWORK, <http://www.ssrn.com> (last visited Feb. 9, 2012). SSRN is a research network or subject repository where authors may post their papers (or even just abstracts of their papers). It is often used for working papers. See *infra* Section IV.E (discussing download and “popularity” metrics). The article that did appear was Cass R. Sunstein, *On the Expressive Function of Law*, 144 U. PA. L. REV. 2021 (1996), with Microsoft Academic Search listing thirty-seven citations to it. By comparison, that article has 813 citing references on Google Scholar. For a complete list of the results, see Shapiro, *supra* note 51, at Table VIII. It is unclear why Lucian Bebchuk’s article was not included even though it appears on SSRN.

65. Shapiro, *supra* note 51, at Table VI–A.

66. JSTOR offers this feature, as do both ProQuest and EBSCO platforms on selected databases such as EconLit and PsychInfo. Some journal publisher platforms, such as Oxford University Press, also have similar capabilities.

67. Shapiro, *supra* note 51, at Table VII, contains all of the top 10 and a few lower-ranked articles from Shapiro’s list of 100 all-time most-cited articles (Table I), with counts available from various databases that provide a citator service. The author intentionally selected articles from journals that were not law school law reviews. *Id.* at Table VIII contains randomly selected articles from post-2000 articles listed in Table II. *Id.* at Tables IX & X indicate how the top 5 articles in 2005 and 2009 (from Table II) performed.

bers still vary widely and the availability of the content is highly dependent on the source database. Nearly all of the top ten articles from Shapiro's all-time top 100 list were found in JSTOR, and the citation numbers rank in somewhat similar order to the Shapiro ranking.<sup>68</sup> This result was not surprising in light of JSTOR's retrospective content, coverage of more prominent law reviews, and broader scope of social science coverage. Many articles were not available at all in Academic Search Premier and Business Source Complete due to the limited title and date coverage of these services for law reviews in general (except for the *Harvard Law Review*). A search of additional articles from Shapiro's all-time top 100 list specifically from social science and commercially published "law and" journals also shows these articles missing from these services.<sup>69</sup>

In light of the limited date coverage, searches for more recent articles in Shapiro's lists were also performed, but they still resulted in a number of articles not being found and erratic counts in citation references being calculated.<sup>70</sup> For searches of all of these articles, the number of cited references varied widely and the availability of the article itself was highly dependent on the source database. While cited-references features in these research databases might be useful for ranking or evaluating search results for research purposes, it is clear that they are not ideal for measuring impact of legal scholarship within law or scholarship more generally.

#### D. "Real World" Impact on Law and Practice and Beyond

Because legal scholarship relates to the law and, thus, to the making and interpreting of law, another metric for measuring legal scholarship is whether it has influence on the bar, judges, legislators, and other policymakers. Recent blogging commentary and articles have discussed the lack of importance or relevance of legal scholarship to the bar and the courts.<sup>71</sup> Impact

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68. *Id.* at Table VII. Note that the citation counts were much lower than those in HeinOnline or Web of Science. *See id.* at Table VI.

69. *Id.* at Table VII.

70. *Id.* at Tables VII, IX & X.

71. *See Law Prof. Ifill Challenges Chief Justice Roberts' Take on Academic Scholarship*, ACSBLOG (July 5, 2011), <http://www.acslaw.org/acsblog/law-prof-ifill-challenges-chief-justice-roberts-take-on-academic-scholarship> (quoting Justice Roberts's commentary about legal scholarship at the Fourth Circuit Judicial Conference and discussing law professor Sherrilyn Ifill's reaction on the Concurring Opinions blog); Chief Justice John G. Roberts, Address to the Annual Fourth Circuit Court of Appeals Conference (June 25, 2011), available at <http://www.c-span.org/Events/Annual-Fourth-Circuit-Court-of-Appeals-Conference/10737422476-1/>. *See also* Michelle M. Harner & Jason A. Cantone, *Is Legal Scholarship Out of Touch? An Empirical Analysis of the Use of Scholarship in Business Law Cases*, 19 U. MIAMI BUS. L. REV. 1 (2011); Michael D. McClintock, *The Declining Use of Legal Scholarship by Courts: An Empirical Study*, 51 OKLA. L. REV. 659 (1998); Deborah J. Merritt & Melanie Putnam, *Judges and Scholars: Do Courts and Scholarly Journals Cite the Same Law Review Articles?*, 71 CHI.-KENT L. REV. 871 (1996); Lee Petherbridge & David L. Schwartz, *An Empirical Assessment of the Supreme Court's Use of Legal Scholarship*, NW. U. L. REV. (forthcoming 2012), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1884462](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1884462) (finding that the Supreme Court uses legal scholarship often and disproportionately



among scholars and citation in other scholarship do not necessarily correlate with how much the courts rely on these articles.

One of the most popular and respected measurements of impact is reference in court opinions. Both KeyCite on Westlaw and Shepard's on Lexis cover citations to law review articles made in judicial opinions. Unfortunately, these citation reports are only for articles indexed in their databases. For articles not included, a homegrown citation search in the all-state and all-federal case law databases was done. Unlike some traditional citation studies, these metrics give some indication of the extent to which an article was referenced.<sup>72</sup>

Using the top ten of Shapiro's all-time top 100 list, Table XI presents the number of citing cases listed in KeyCite and Shepard's. While there is some correlation in that all of the top ten articles that have Shepard's and KeyCite reports also have a relatively respectable citation count, there is no consistency in the ranking of the articles. A search was also run of the case law available on Google Scholar, finding that the counts sometimes varied widely from the Shepard's and KeyCite counts relative to the similarity in results between Shepard's and KeyCite.<sup>73</sup>

The impact of scholars' works on government or policy is also reflected through the citation of scholars' works in government documents and, more often, by the direct and active participation of individual scholars in the legislative process, as through the giving of congressional testimony, the authoring of amicus briefs, and service in government-appointed committees and other governmental activities. Direct participation could be a reflection of the scholar's expertise in a certain area and institutional "public service" requirements, but there has been recent discussion questioning the appropriateness of such direct participation.<sup>74</sup> Some have also argued that there is a role for the legal academy to develop scholarship with the "real

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when cases are either more important or more difficult to decide); David L. Schwartz & Lee Petherbridge, *The Use of Legal Scholarship by the Federal Courts of Appeals: An Empirical Study*, 96 CORNELL L. REV. 1345 (2011) (finding marked increase in the frequency of citation to legal scholarship in the reported opinions of the circuit courts of appeals in the last fifty-nine years).

72. KeyCite indicates how an article was referenced with its "depth of treatment" star system: three stars means "discussed," two means "cited," and one means "mentioned." There is also an indication of whether the article was actually quoted.

73. A search was run for the author and exact name of the article as required terms in "legal opinions from all courts" in the Advanced Search. The significance of this search is difficult to evaluate because of the ambiguity of the source data for Google court decisions.

74. In a recent paper, a law professor questions the appropriateness of legal academics' involvement in activities such as amicus briefs. Richard H. Fallon, Jr., *Scholars' Briefs and the Vocation of a Law Professor* (Oct. 29, 2011) (unpublished manuscript), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1959936](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1959936); see also Paul Horwitz, *Fallon, Amicus Briefs, and the Healthcare Litigation*, PRAWFSBLAWG (Nov. 14, 2011, 5:07 PM), <http://prawfsblawg.blogs.com/prawfsblawg/2011/11/fallon-amicus-briefs-and-the-healthcare-litigation.html>.

world” practitioner or public in mind.<sup>75</sup> With the rise of pro bono programs and the connection between legal education and practice, it is arguable that this metric might become increasingly important in hiring and tenure decisions in law schools.

### E. *Download or “Popularity” Metrics*

With the proliferation of services available for faculty to share their scholarship online, “download” or “view” counts have also become a dominant marker of “impact,” particularly download counts from subject and institutional repositories. (Some full-text research databases and other commercial services have begun to reflect usage statistics in their products.<sup>76</sup>) This type of metric differs significantly from citation metrics: it is really a measurement of the “popularity” or visibility of the article, noting whether an abstract was viewed or visited and whether a link was clicked rather than whether the paper was actually read, thought well of, and used. There has been some research to suggest that the availability of an article in open-access form in these types of services has an influence on actual citation counts.<sup>77</sup>

In law, faculty members continue to participate in various subject-matter and university repositories. SSRN remains one of the most popular subject-matter repositories for faculty, commanding popularity for its download counts. Seeming to recognize the distinction between downloads and citations, SSRN has also begun experimenting with citation counts in other SSRN papers, although this service is still very much in beta and SSRN acknowledges that its data is very incomplete.<sup>78</sup> Some faculty, such as those in law and economics, might participate in other non-law subject-matter repositories like Research Papers in Economics (“rePEc”),<sup>79</sup> which also provide various statistical information about their papers. University and law school repositories offer another venue through which faculty can share their scholarship, providing one more branded performance metric to measure downloads, although individual statistics for individual papers are not often publicly available. Lastly, more law reviews are increasingly making

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75. E.g., James G. Milles, *Redefining Open Access for the Legal Information Market*, 98 LAW LIBR. J. 619 (2006).

76. Ex Libris, a vendor for bibliographic utilities for libraries, recently released a “Hot Articles” mobile telephone application, which lists scholarly articles in various fields (including law) that have been “popular among researchers in recent weeks.” See Hot Articles on Your Smartphone, EXLIBRIS, available at <http://exlibrisgroup.com/category/HotArticlesMobileApps> (last visited Apr. 22, 2012).

77. See James M. Donovan & Carol A. Watson, *Citation Advantage of Open Access Legal Scholarship*, 103 LAW LIBR. J. 553 (2011). But see Patrick Gaulé & Nicolas Maystre, *Getting Cited: Does Open Access Help?*, 40 RES. POL’Y 1332 (2011).

78. SSRN utilizes a service called “CiteReader” with ITX Corporation. Data is dependent on content and referencing and formatting in author papers coupled with some human proofreading. Algorithms are still in development. See Greg Gordon, *SSRN’s CiteReader Project Update*, SSRN BLOG (Apr. 26, 2011), <http://ssrnblog.com/2011/04/26/ssrns-citereader-project-update/>.

79. REPEC, <http://repec.org> (last visited Feb. 16, 2012).

their own content available on the internet through institutional repositories and hosted services or by posting content to their own law school websites, adding yet another potential download metric if the content is publicly available and branded appropriately.<sup>80</sup>

Such download or “click” metrics provide a broader or more inclusive sense of impact than traditional citation because they help capture a sense of the visibility of one’s scholarship, particularly beyond the legal scholars who write in law reviews and social science journals. While citations are limited to use by other scholars who actually publish in the set of publications covered in the source data, download metrics potentially include popularity among a broader audience of readers, such as nonscholars or people who view or read an article but might not have occasion to reference it. More importantly, download metrics cover a broader range of users geographically as much of the source data used in common citation studies focus on U.S.-, European- and Anglo-American-oriented publications in English.

While the availability of scholarship in such repositories is increasing and while a few law schools have adopted open-access policies that impose participation in institutional repositories, the metrics or numbers available are still, to a large degree, limited to the authors and journals that choose to participate in such repositories and are thus somewhat arbitrary and inconsistent. It is also arguable that repository metrics are skewed toward more recently published work (mostly from the latter half of the twentieth century to the present) and faculty who use repositories heavily. Furthermore, authors participate in such repositories at various stages in the production of their work (working paper or preprint, after submission to journal, after publication, et cetera) so that multiple versions of the same article are available for harvesting and counting, making it difficult to compare numbers within and across repositories.

It is arguable that papers with higher download counts skew more favorably toward newer articles. Looking at SSRN, which has fairly broad and active participation within the law school community, pre-1990 papers from Shapiro’s lists are difficult to find, and favorable ranking in his tables does not necessarily equate with the “top downloaded” articles in SSRN. Of the articles in this study’s all-time top 100 list in Table I, only 5 of the papers are on SSRN (2 of which are only abstracts). On the other hand, in a search for all of the articles appearing on the most-cited 1990–2009 articles listed in Table II, all but 4 of the articles were found on SSRN and virtually every author on that list was on SSRN.

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80. The varied use of repositories makes it difficult to assess the meaning of a single repository’s download count when the same content is available in multiple places. A project called PIRUS2 standardizes and potentially aggregates metrics from a variety of sources. PIRUS2 PROJECT, <http://www.cranfieldlibrary.cranfield.ac.uk/pirus2/> (last visited Feb. 16, 2012). It remains to be seen if this project will eventually help provide some “ubermetric” for clicks or downloads that might be a more holistic representation of the popularity of the same paper across repositories on the internet.

The top downloaded paper of all time on SSRN as of the writing of this Article appears on none of Shapiro's lists.<sup>81</sup> Furthermore, only one paper on Shapiro's all-time top 100 list in Table I or recent-articles list in Table II appears in SSRN's top 100 downloaded papers (*Property, Intellectual Property, and Free Riding* by Mark A. Lemley). Of the top 100 downloaded law authors in SSRN, only 15 are on any of Shapiro's lists. Looking at the authors listed in the recent-articles list in Table II, the author's most downloaded paper of all time appears in this list only approximately half the time. It is clear that while arguably a metric in and of itself, being a top downloaded paper in SSRN does not equate with being a *top-cited* paper of all time. One could argue that an article's presence in newer cited-reference services might potentially provide a new metric, but as with other metrics, it is subject to the volatility of the source content.

#### F. "Buzz" Metrics

Furthermore, beyond just the popularity reflected in "download" counts, there has been an increase in what one might term "buzz metrics"—popularity not necessarily measured by counts of citations in others' work or even by downloads, but rather measured by broader "visibility and recognition" in traditional media sources, blogs, et cetera.<sup>82</sup> While such metrics have become important for law school communications offices and scholars themselves, it is not clear that they have completely supplanted the value of traditional "citology" in measuring the influence, impact, or significance of legal scholarship, or in the hiring and tenure decisions of U.S. law schools. Law school communications, development offices, and libraries, however, contribute to the buzz by investing a lot of time and attention in showcasing faculty scholarship in both traditional and media forms and by paying more attention to public faculty websites and profiles. In addition, an increasing number of scholar-oriented social networks have evolved for faculty to share profiles and papers.<sup>83</sup> More scholars (and law reviews) are now finding themselves on Twitter with measures of how many "followers" they have.

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81. Daniel J. Solove, *"I've Got Nothing to Hide" and Other Misunderstandings of Privacy*, 44 SAN DIEGO L. REV. 745 (2007).

82. See Brian Leiter, *Why Blogs Are Bad for Legal Scholarship*, 116 YALE L.J. POCKET PART 53, 54 (2006), <http://yalelawjournal.org/the-yale-law-journal-pocket-part/scholarship/why-blogs-are-bad-for-legal-scholarship/> ("A blogospheric 'buzz' is one thing, of course, and real scholarly impact is another."); Michael A. Mogill, *Academic TROS: How to Prevail in the Court of Public Opinion*, 27 N.M. L. REV. 473 (1997).

83. Mendeley allows users to create profiles and share papers and just started offering institutional editions. See MENDELEY, <http://www.mendeley.com> (last visited Apr. 22, 2012). Academia.edu is also growing. See ACADEMIA.EDU, <http://academia.edu> (last visited Apr. 22, 2012). Google Citations and Microsoft Academic are also offering profiles. See Google Scholar Citations, <http://scholar.google.com/citations/> (last visited Apr. 22, 2012); What Is Microsoft Academic Search?, <http://academic.research.microsoft.com/About/Help.htm> (last visited Apr. 23, 2012). Open Scholar is an open-source solution that institutions may adopt. See OPENSCHOLAR, <http://openscholar.harvard.edu/> (last visited Apr. 22, 2012).

People are using social media and other tools to curate and highlight others' scholarship worthy of their readers' attention.<sup>84</sup>

Even more significantly, legal blogs themselves have been growing as a source of commentary.<sup>85</sup> An increasing number of law reviews provide web-based companions for "short-form" scholarship.<sup>86</sup> While there is no compelling evidence that such writing activities have risen to the level of full-article writing for the purposes of hiring and tenure review, participation in such activities (and commentary about one's scholarship in such venues) does contribute to some sort of "buzz" that might be difficult to quantify but that does provide an overall sense of recognition.

#### V. LIMITATIONS OF CITATION METRICS (PEARSE)

Any type of metric measuring scholarly impact is often inherently subjective and imperfect and should be interpreted in the context of the source data in which it was based and its intended use or meaning. All citation studies and new tools and metrics for assessing the "impact" of legal scholarship are arguably incomplete in some sense. Furthermore, many of the tools and methodologies often lack a "qualitative" aspect (e.g., whether the citing reference was responding directly to the article, relying on the article heavily, or merely mentioning it in a string citation, et cetera). More importantly, scholarship may be cited in a critical or negative way. Is it important to distinguish references as positive, negative, or neutral, or are all references equal? Like publicity, is any citation or reference a good citation? Furthermore, should we be discounting or weighting references in articles authored by the same author?

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84. A recent editorial article from the medical research area suggests that highly tweet-ed scholarship leads to increased citation. Gunther Eysenbach, *Can Tweets Predict Citations? Metrics of Social Impact Based on Twitter and Correlation with Traditional Metrics of Scientific Impact*, 13 J. MED. INTERNET RES. e123 (2011), available at <http://www.jmir.org/2011/4/e123/>; see also *Altmetrics: About*, ALTMETRICS, <http://altmetrics.org/about> (last visited Feb. 16, 2012) (new project in the sciences for "the creation and study of new metrics based on the Social Web for analyzing, and informing scholarship"). One project for tracking the scholarly work on the web, Total-Impact, recently received a grant totaling \$125,000 from the Alfred P. Sloan Foundation. News Release, UNC School of Information and Library Science, Jason Priem, SILS Ph.D. Student, and Co-PI Heather Piwowar, Receive \$125K Grant to Track the Impact of Scholarly Work on the Web (Apr. 5, 2012), available at <http://sils.unc.edu/news/2012/priem-sloan>. The principal investigators, Jason Sloan and Heather Piwowar, are intending to target SSRN and other law-related sources as they use the grant money to expand their project. E-mail from Heather Piwowar, Postdoctoral Fellow, Nat'l Evolutionary Synthesis Ctr., to Michelle Pearse (Apr. 23, 2012, 01:14 AM EST) (on file with authors).

85. E.g., *The Post: Good Scholarship from the Internet*, 1 POST 367 (2011), <http://journaloflaw.us/5%20The%20Post/The%20Post%20home.html> (dedicated to identifying the best legal blogging). *The Post* does not claim to elevate legal blogging to the status of full articles, but recognizes its value.

86. E.g., Colin Miller, Submission Guide for Online Law Review Supplements, Version 5.0 (Aug. 5, 2011) (unpublished manuscript), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1410093](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1410093) (listing thirty-six online companions to law reviews).

Even within traditional bibliometrics, one is often trying to compare content that does not exactly correspond. In nontraditional metrics, such as download counts from repositories, social media, et cetera, the issue of comparing “apples and oranges” becomes even more pronounced with each metric needing to be considered in its own light. Nevertheless, traditional scholarly impact and citation might be only one factor in assessing a scholar’s influence on the law broadly speaking, and looking at the same scholar or article across metrics might provide a fuller or more complete picture or from a more holistic perspective.

#### VI. THE FUTURE OF LEGAL SCHOLARSHIP AND CITATION METRICS (PEARSE)

When asked about the future of legal scholarship, Brian Leiter has suggested that it will be more interdisciplinary and increasingly published in peer-reviewed journals with leading law reviews continuing to publish but using significant de facto peer review.<sup>87</sup> While new forms of scholarship such as blogging are unlikely to supplant traditional legal scholarship until tenure guidelines and practices evolve further, one could argue that they provide some sort of “democratization” of opportunities for building credibility and expertise, subject to open commentary (including commentary by more traditional experts) and criticism in the court of public opinion.

Burgeoning nontraditional forms of publication will certainly have their role, but the extent to which they disrupt the traditional hiring and tenure practices at law schools might depend a great deal on the needs of each individual school and the future of legal education in general.<sup>88</sup> There has been much debate over potential changes in American Bar Association standards, particularly as regards tenure and the future of legal education.<sup>89</sup>

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87. Email from Brian Leiter, Professor of Law, U. of Chi. Law Sch., to Fred Shapiro, Assoc. Librarian for Collections and Access and Lecturer in Legal Research, Yale Law Sch. (Jan. 2, 2012 16:22 EST) (on file with author). *See also* Leiter, *supra* note 82, at 57–58 (hypothesizing that “blogs have been bad for legal scholarship, leading to increased visibility for mediocre scholars and half-baked ideas and to a dumbing down of standards and judgments,” but suggesting that first-rate scholars entering the blogosphere and a shift to peer-review publishing may ameliorate these negative effects). Many of the law reviews listed in Table V have been practicing some form of peer or faculty review. *See Peer Review at Student-Edited Journals: Best Practices?*, PRAWFSBLAWG (Aug. 11, 2011, 2:25 PM), <http://prawfsblawg.blogs.com/prawfsblawg/2011/08/peer-review-at-student-edited-journals-best-practices.html>; *see also* PRSM: PEER REVIEWED SCHOLARSHIP MARKETPLACE, <http://www.legalpeerreview.org> (last visited Feb. 26, 2012).

88. *See* Symposium, *The Future of Legal Education*, 96 IOWA L. REV. 1449 (2011); Karen Sloan, *AALS Hears Words of Caution from Departing Dean*, NAT’L L.J. (Jan. 5, 2012), <http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202537486631>; Karen Sloan, *A Prescription for Law Schools: Go Back to the Basics, Return to ‘Terra Firma’*, NAT’L L.J. (Jan. 6, 2012), <http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202537684344>.

89. *See* Moira Herbst, *ABA Committee Considers Dropping Tenure-Policy Requirement*, THOMSON REUTERS NEWS & INSIGHT (Nov. 16, 2011), [http://newsandinsight.thomsonreuters.com/Legal/News/2011/11/\\_November/ABA\\_committee\\_considers\\_dropping\\_tenure-policy\\_requirement/](http://newsandinsight.thomsonreuters.com/Legal/News/2011/11/_November/ABA_committee_considers_dropping_tenure-policy_requirement/). *See generally* AM. BAR ASSOC. SECTION OF LEGAL EDUC. AND

While a small number of elite law schools might be able to continue with traditional scholarly measures such as traditional law journal publications and their corollary citation-counts, it is arguable that the new world of legal education might require new metrics and new ways of assessing and looking at experts in areas.<sup>90</sup>

#### CONCLUSION (SHAPIRO AND PEARSE)

Employing recent enhancements to tools for citation analysis, it has been possible in this study to create most-cited legal articles lists that are more up-to-date and more reliable than in the past. These lists continue to be dominated by faculty at a small number of upper-tier law schools and law reviews and to be focused on citation in traditional journals as the hallmark of impact. Looking forward, we see that new technologies are ushering in new venues for publishing scholarship and new methods for assessing scholarly impact. While novel venues and metrics for scholarship might not completely supplant or disrupt traditional publication forms and citology, they do provide an alternative window for viewing academic output and potentially contribute to a more holistic picture of impact. As law schools evolve to respond to a changing legal-education marketplace (and disruptions in education more generally) and seek new ways of evaluating their programs and faculty, these alternative measures of impact might become even more significant.

Both traditional citology and alternative approaches are inherently imperfect and incomplete, in part because of overly broad or narrow source data. In the end, regardless of the publication venue, all involved in publishing legal scholarship should be striving for an environment in which authorship, affiliation, and editorial responsibility are clearly marked so that readers can fully evaluate the credibility of what they are reading. Adoption of technical standards and better design of structures, methodologies, and network analysis will, we hope, result in more accurate and informative studies.

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ADMISSIONS TO THE BAR, STANDARDS AND RULES OF PROCEDURE FOR APPROVAL OF LAW SCHOOLS (2011–12 ed., 2011). Ken Hirsch of University of Cincinnati College of Law has also questioned just how much alternative metrics like download counts are considered in tenure guidelines.

90. See David Segal, *What They Don't Teach Law Students: Lawyering*, N.Y. TIMES, Nov. 20, 2011, at A1, available at <http://www.nytimes.com/2011/11/20/business/after-law-school-associates-learn-to-be-lawyers.html> (commenting on lack of practical instruction in legal education and significantly commenting on legal scholarship). This article was highly criticized in the blogosphere. See Orin Kerr, *What the NYT Article on Law Schools Gets Right*, VOLOKH CONSPIRACY (Nov. 20, 2011), <http://volokh.com/2011/11/20/what-the-nyt-article-on-law-schools-gets-right/>; Karen Sloan, *Legal Scholarship Carries a High Price Tag*, NAT'L L.J. (Apr. 20, 2011), <http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202490888822>. For a prescient discussion of the future of law school rankings, see Symposium, *The Next Generation of Law School Rankings*, 81 IND. L.J. 1 (2006).