NONLEGAL INFORMATION AND THE DELEGALIZATION OF LAW

FREDERICK SCHAUER and VIRGINIA J. WISE*

ABSTRACT

Technological changes have made access to nonlegal information such as newspaper reports and general interest books far less costly. As expected, this has increased the citation to such materials, not only absolutely but as a proportion of citations generally and of secondary citations. We document this change through analyses of citation to nonlegal information in the Supreme Court of the United States, in the Supreme Court of New Jersey, and in selected other courts. The increase in the citation to nonlegal information is explainable only by a decrease in the cost of access to such information that is greater than the decreased cost for access to other sorts of information traditionally relied on by lawyers, judges, and law clerks. If this trend continues and signals a change in acceptable authority, it may foreshadow the decreased dominance of the traditional canon of legal information, which may in turn produce the phenomenon we call the “delegalization” of law.

In Kumho Tire Company, Ltd. v. Carmichael,1 the Supreme Court of the United States held that the rules for expert testimony established in Daubert v. Merrell Dow Pharmaceuticals, Inc.,2 applied not only to scientific expert testimony like that in Daubert but to other areas of specialized knowledge as well. In Kumho the contested domain of expert testimony was tire failure

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analysis, for the automobile accident that was the basis of the litigation was caused by a tire blowout that in turn appeared to have been caused by tire failure. And in setting the factual background for the case and for consideration of what, if anything, might make one an expert in tire failure analysis, Justice Breyer, writing for the Court, relied early in his opinion on three books about tires, none of which had been cited in the briefs, and one of which was entitled *How to Buy and Care for Tires*.

It is safe to conclude that *How to Buy and Care for Tires* is not part of the historically recognized canon of legal information. Traditionally, it did not have the status as authority of the *United States Reports*, the *Federal Reporter*, the *Massachusetts Reports*, the *Harvard Law Review*, *Corbin on Contracts*, the *Restatement of Torts*, or even *Corpus Juris Secundum*. Yet here it is, unashamedly making its appearance in a majority opinion of the Supreme Court of the United States, along with various other books and articles on tire design, manufacture, and maintenance.

If *How to Buy and Care for Tires* were simply an aberration, it would not deserve serious attention. Even in the era of stringent rules about what could be cited and what could not, sources of information not part of the traditional hierarchy of legal sources would occasionally appear in briefs, in arguments, and in judicial opinions. In 1950, for example, the United States Supreme Court cited an article in the *Harvard Business Review*, and the Supreme Court of New Jersey cited an article in *Life* magazine, yet we have no evidence that the judges responsible for those citations were criticized or sanctioned for departing from the legal canon.

But when the Supreme Court of New Jersey cited *Life* magazine, it did so in a year in which only four of that court’s citations were to nonlegal material, and three of those four were to *Webster’s Dictionary*. By contrast, Justice Breyer cited *How to Buy and Care for Tires* in a case containing six citations to similarly nonlegal material, and during a term in which the Supreme Court of the United States cited to nonlegal material on 217 occasions, that number being more than four times the number of citations to nonlegal sources in 1950, more than three times the number of citations to nonlegal sources as recently as 1990, and more than four times as many citations as in 1990 when the absolute numbers are adjusted to account for the decreased volume of opinions produced by the Court.

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3 One of the best examples of such stringent rules was the English rule, no longer in force but still having some residual effect on citation practice, that secondary material could be cited only if the author were dead. We discuss this rule in Frederick Schauer & Virginia J. Wise, Legal Positivism as Legal Information, 82 Cornell L. Rev. 1080, 1088–89 (1997).

4 We will define this term presently.
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Not only was the citation to *How to Buy and Care for Tires* not an aberration for the 1998 term of the Supreme Court, it is increasingly nonaberrational for the post-1990 Supreme Court. Since 1990, the Supreme Court’s citation of nonlegal sources has increased dramatically, even as the number of citations has remained relatively constant, the number of clerks for the justices has remained constant, and the number of pages of opinions produced by the Court has decreased. Moreover, the same phenomenon of increased citation to nonlegal materials is seen in state courts and lower federal courts as well, although the absolute numbers are lower and the trend is slower.

Our aim in this paper is to document the findings we have just foreshadowed, to offer some explanations for the phenomenon, and to venture some speculations on the implications for the future. We will suggest that technological changes, primarily the expansion of Westlaw and LEXIS databases and the dramatically increased use of the Internet, have made ease of access to nonlegal information easier by orders of magnitude (and consequently reduced the cost of such access), thus explaining much of the increase in its use. But if law is itself understood partially in terms of its canon of authority, and if this canon of authority is not only expanding but breaking down in the process, then it may be that the increase in reliance (not the same as citation, to be sure, as we will discuss presently) on nonlegal information has profound implications for how we understand law itself. This latter phenomenon is the one we label the “delegalization of law,” but our speculations about this follow, for us, from the less speculative empirical analysis that constitutes the bulk of this paper.

I. DEFINING THE “LEGAL”

This project hinges on a demarcation between legal and nonlegal sources and on the belief that law, itself an authority-soaked practice, has traditionally drawn a distinction between good and bad authority, privileged and nonprivileged authority, and authorities that rank higher or lower in the hierarchy of authorities. Just as a recent decision of the highest court within the same jurisdiction as the deciding court ranks at or near the top of this hierarchy, so too are authorities outside of the traditional legal canon traditionally understood to be at or even below the bottom of the hierarchy of acceptable authority.

In order to examine changes in this hierarchy, especially changes at the bottom of the hierarchy, we need a manageable distinction between legal and nonlegal sources. This distinction, of course, need not be susceptible of a simple definition. The language of authority is in important respects the
language of the law, and just as one can be fluent in English without being able to spell out all of its rules, so too can one be fluent in law without being able to spell out all of its rules. So part of what we have done is to look at citation practices as competent speakers of law, identifying nonlegal sources in much the same way that competent speakers of English can easily identify bad English without having to consult the formal rules of grammar or syntax.

Moreover, the distinction between the legal and the nonlegal, like the distinction between night and day, short and tall, bald and not bald, and frogs and tadpoles, does not depend on the absence of borderline cases. All distinctions potentially have borderline cases, and distinctions are usable if they distinguish most of the cases, even if they deal only with difficulty with the cases lying on the border. And although lawyers, particularly, are likely to be preoccupied with dusk when people ask them about the distinction between night and day, we do not believe that the existence of borderline cases undercuts the existence of a workable distinction between legal and nonlegal authority.

In order to draw this distinction, therefore, we have first imagined the exemplars that lie clearly on one side or the other of the distinction between legal and nonlegal sources. On the clearly legal side would be the constitutions, statutes, regulations, and court rules of American jurisdictions, the reported decisions of American courts, legal encyclopedias (Corpus Juris Secundum, American Jurisprudence), legal dictionaries (Black’s, Ballantine’s, Bouvier’s), standard textbooks or treatises on distinctly legal subjects (Pomeroy on Equity, Wigmore on Evidence, Corbin on Contracts, Prosser on Torts, Sutherland on Statutory Construction, and so on), and law reviews published by American law schools. And on the clearly nonlegal side would be daily general interest newspapers like the New York Times, the Washington Post, and the Boston Herald; general interest magazines such as Time, Life, Newsweek, and People; specialized nonacademic periodicals not aimed especially at lawyers or judges (Field and Stream, Fine Woodworking, Bon Appetit, Bicycling); specialized academic periodicals not aimed especially at lawyers (the Journal of Philosophy, Econometrica, Critical Inquiry, Scripta Mathematica); general interest books such as one would find on the New York Times best-seller list or at airport book racks; specialized academic books not aimed at lawyers or judges, such as Serving the Master: Slavery and Society in Nineteenth-Century Morocco and Mus-

6 Mohammed Ennaji, Serving the Master: Slavery and Society in Nineteenth-Century Morocco (Seth Graebner trans. 1999).
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Muscletown USA: Bob Hoffman and the Manly Culture of York Barbell; and specialized nonacademic books not aimed at lawyers or judges, such as How to Buy and Care for Tires.

This distinction is consistent with a formulation of the distinction that we believe is relevant to our hypothesis about technological change—would the source have been available on the shelves of a typical federal, state, county, municipal, or law school law library in, say, 1970? And it is also consistent with a formulation that we believe reflects and supported the traditional canon—would it have been a source of criticism if a first-year law student had included the source in a moot court brief written for internal, first-year, training purposes? With respect to the distinction we draw in the previous paragraph, we believe and assume that the sources we designate as “nonlegal” are sources that would only rarely have been available even in a well-stocked law library and would generally have been the subject of at least a raised eyebrow if included in a first-year moot court brief.

As we have examined thousands of opinions, it turns out that this distinction enables us to deal with and categorize the overwhelming number (well over 99 percent) of citations without difficulty. Moreover, most of the borderline cases are ones that are sufficiently repetitive that we have been able to assign them to one category or another. Government documents in general and legislative history in particular are both classed as legal. So too are books of history of and about law, even if written by historians rather than lawyers. But journals from disciplines other than law are classed as nonlegal, even though these journals (American Political Science Review, American Economic Review) may occasionally (and more often than Scripta Mathematica) have articles about or directly relevant to legal questions.

Once the repetitive borderline cases are assigned to one category or another, the remaining borderline cases turn out to be quite rare. Is an essay by Laurence Tribe in The Nation legal or nonlegal? What about a secondary history of the Constitutional Convention of 1787? When these have come up we have, somewhat arbitrarily, assigned them to one or the other category (nonlegal in the former case, legal in the latter), but we are convinced that the number of borderline cases is sufficiently small that the categorization we have adopted gives us a distinction between legal and nonlegal sources that is not only quite workable but that also reflects our own under-

standing, and that of many others, about the traditional domain of legal authority.

II. NONLEGAL CITATION IN THE SUPREME COURT OF THE UNITED STATES

Our most extensive analyses have been of the opinions of the Supreme Court of the United States and, as a case study of other courts, the opinions of the Supreme Court of New Jersey. We take up first the United States Supreme Court. Using the above distinction between legal and nonlegal sources, we manually examined in hard copy every page of all of the opinions of the Supreme Court for the 1950, 1955, 1960, 1965, 1970, 1975, 1980, 1985, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, and 1998 terms of the Court, making notes of all citations to nonlegal authority. This task, simultaneously tedious and illuminating, produced the results in column 1 of Table 1.

One possibility is that the figures in column 1 do not indicate a rise in the frequency of nonlegal citation, since they might simply reflect an increase in the Court’s output, with the frequency of nonlegal citation remaining constant. Yet it turns out that the hypothesis of increased total volume is not supported by the data. Although the 1950 term of the Court produced only 1,021 pages, there was a significant increase in page output in the era of the Warren Court, and that has held relatively constant ever since. The 1960 term of the Supreme Court, for example, contained 1,948 pages (in the Supreme Court Reporter) of opinions and orders, the 1970 term contained 2,294 pages, the 1980 term 3,164 pages, the 1990 term 2,923 pages, the 1995 term 2,641 pages, the 1996 term 2,582 pages, the 1997 term 2,423 pages, and the 1998 term 2,330 pages, with the page and type size remaining constant since 1960. Thus, the number of nonlegal citations appears to be increasing even as the total output of the Court is, at best, staying constant. Using 1970 as a baseline, column 2 adjusts the raw numbers in column 1 to produce the number of citations normalized to the 1970 page output.

Several other possible variables that might explain the rise turn out as well to have little explanatory force. Although the number of law clerks to the justices is higher than it was in 1950 or 1960, there has been no change

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8 In the spirit of the replicability of academic research, as well as in the spirit of making data generally available to other researchers, these notes, as well as the notes of other data collection described in this article, are available upon request to the authors.

9 For the terms prior to 1960, number of pages per volume was multiplied by 1.4 to adjust for the larger type size and larger spacing used from 1960 to the present.
since the mid-1970s, when the current practice of three or four clerks per justice became the norm. As a result, the increase in citation to nonlegal sources cannot be attributed to an increase in judicial staff, and thus to a lower cost for the individual justice. Another possibility is that the total number of citations, for whatever reason, has been increasing and that the increased number of nonlegal citations merely reflects an increase in total citations. It turns out, however, that this is not the case. Using a random sample of pages, we determined that the number of citations per page of reported opinion has remained relatively constant between .35 and .40 from 1975 to the present.\textsuperscript{10} This is consistent with our nonsampling analysis of the Supreme Court of New Jersey,\textsuperscript{11} and consistent as well with our analysis of the tables of authorities cited, all of which suggest that the amount of

\textsuperscript{10} We counted only the first mention of a case or article within a given opinion, and thus what may appear to be a lower than expected number reflects not only the absence of citations within the “statement of facts” portion of an opinion but also the fact that a multipage analysis of a previous opinion counted as only one citation.

\textsuperscript{11} The New Jersey results, described below in Section III, support the view that there has been a substantial increase in the relative frequency as well as in the absolute volume of nonlegal citation.
citation, in general, has increased at most by a minuscule amount.\textsuperscript{12} Thus, the increase in nonlegal citation appears not to be explainable by an increase in the overall volume of citation nor, as we detail below, by an increase in the overall volume of citation to secondary sources. And with these alternative explanations out of the way, therefore, it appears that there has been a genuine and substantial increase in the frequency of nonlegal citation by the United States Supreme Court and that this phenomenon appears to have begun no earlier than 1990.

When we look at the materials the Court is citing, we see changes as well. When the Court was citing to 50 or so nonlegal sources a year,\textsuperscript{13} many of those citations were to standard classical or historical authors (Plato, Aristotle, Hobbes, Locke, Montesquieu, Jefferson, Shakespeare, and others),\textsuperscript{14} supplemented by occasional references to daily newspapers (especially the \textit{New York Times}); to newsmagazines (\textit{Time}, \textit{Life}, and \textit{Colliers} were the most frequently cited); to academic journals in economics, political science, and finance; and to nonlegal books, usually historical, about topics that had become of central constitutional importance, such as religious liberty and freedom of speech.

When the quantity of nonlegal citation began to grow in the early 1990s, however, the increase was not, as might have been expected, in the volume

\textsuperscript{12} It is possible that the rise in nonlegal citation merely follows the rising tide of an increase in citation to secondary authority, but, as we document in the next section, this appears not to be the case. Although the degree of citation to secondary authority is increasing, it is increasing at a much slower rate than the increase in the citation to nonlegal authority. Nor are our conclusions inconsistent with those in Montgomery N. Kosma, Measuring the Influence of Supreme Court Justices, 27 J. Legal Stud. 333, 344 (1998), which documents a very slight increase in the number of citation per Supreme Court opinion between 1970 and 1991. Because the length of Supreme Court opinions has been increasing substantially (in the 1985 term, the Court used 3,345 pages to produce full opinions in 156 cases. In the 1996 term, it used 2,537 pages to produce full opinions in 84 cases), Kosma's results showing a slight increase in citation per opinion are not inconsistent with our results showing flatness with respect to density or frequency of citation.

\textsuperscript{13} In the 1950s, 1960s, and early 1970s, even the 50 or so citations a term to nonlegal sources is a misleadingly high figure, since the bulk of those citations were provided by Justice Douglas, typically in cases dealing with freedom of religion and freedom of speech. See, for example, McGowan v. Maryland, 366 U.S. 420 (1961); Gillette v. United States, 401 U.S. 437 (1971). Although a disproportionate amount of the increase in the 1990s may be attributable to Justice Breyer (as with his dissenting opinion in United States v. Lopez, 514 U.S. 549 (1995)), the percentage contribution of Justice Breyer in the 1990s, where Justices O'Connor, Ginsburg, Kennedy, Souter, and Stevens, and to a lesser extent Justice Scalia, all cited to nonlegal sources with some frequency, is less than that of Justice Douglas in the 1950s and the 1960s, where nonlegal citation by the other justices was rare.

\textsuperscript{14} See Fritz Snyder, The Great Authors and Their Influence on the Supreme Court, 7 Legal Reference Services Q. 285 (1987).
of the same type of nonlegal material the Court had previously been citing. For example, from the 1990 term through the current point in the 1998 term, the Court cited Shakespeare 11 times, Montesquieu 5 times, Plato 9 times, Hobbes once, and Tacitus not at all, compared with 24 for Shakespeare, 27 for Montesquieu, 9 for Plato, 3 for Hobbes, and 4 for Tacitus in the period ending in 1987. \[^{15}\]

Although there does appear to have been a significant increase in the number of nonlegal history books cited, most of the increase appears to be attributable to an increase in the number of citations to textbooks and academic journals in economics, political science, sociology, psychology, medicine, criminology, pharmacology, and so on, and to an increase in the number of citations to daily newspapers, not only the Washington Post, the New York Times, and the Wall Street Journal, but also the Los Angeles Times, the Chicago Tribune, the Philadelphia Inquirer, the Houston Chronicle, the Arizona Republic, the St. Petersburg Times, the Boston Globe, and many other regional or local newspapers. Moreover, How to Buy and Care for Tires is moderately typical of an increase in citation to academic, semiacademic, and nonacademic studies of various specialized topics, including garbage, guns, drug use, the environment, bicycle paths, political debates, parades, race relations, gender roles, dentistry, cable television, holidays, fishing, schools, the Ku Klux Klan, and, most recently, tires. And although there has been an increase in the number of quotations to the Bible, there has also been an increase in the variety of quoted sources, including, in the 1997 term, both M*A*S*H and Sesame Street.

With some frequency the cited sources appear to have come from the briefs of the parties, but it would be a mistake to attribute too much of the increase to information provided in this way by the litigants or amici. Far more often than not, the nonlegal source cannot be found in any of the briefs, which leads to the conclusion that these sources were in the bulk of cases located by the justices (unlikely) or their clerks (much more likely). But given that the number of clerks had not increased, and given that the total number of citations had not increased, the conclusion is that something happened, starting in the early 1990s but not earlier, to make citation of nonlegal materials more attractive to the justices and their clerks. In order to focus more closely on what that something might have been, we have also looked at the state and lower federal courts, although our methods here have been somewhat different, and in the next section we will describe some of the results of this research.

\[^{15}\] The pre-1987 citations are from Snyder, supra note 12, at 286–87.
III. Nonlegal Citation in the Lower Courts

Guided by our examination of the Supreme Court cases, we suspected that we would see similar increases in the citation of similar materials in the lower courts. Because a significant component of the rise in nonlegal citation in the Supreme Court was made up of citations to daily newspapers, we looked for citations to the *New York Times*, the *Washington Post*, and the *Los Angeles Times* in all courts other than the Supreme Court of the United States, and we produced the results given in Table 2.

In addition to an increase in the citation of daily newspapers, the examination of Supreme Court opinions indicated an increase in citation to academic books and journals outside of law, so in looking at courts other than the Supreme Court we searched for citation to more academic material. We searched for citations to the *American Political Science Review* and the *American Economic Review*, with the search yielding the results given in Table 3.

At lower (and thus less reliable) levels of frequency, we also searched for references to "John Rawls," "Nozick," and "Pareto" (see Table 4). And we also searched for references to the *Statistical Abstract of the United

<table>
<thead>
<tr>
<th>TABLE 2</th>
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<tbody>
<tr>
<td><strong>COMBINED LOWER COURT CITATIONS TO THE <em>NEW YORK TIMES</em>, <em>LOS ANGELES TIMES</em>, AND <em>WASHINGTON POST</em></strong></td>
</tr>
<tr>
<td>Year</td>
</tr>
<tr>
<td>1980</td>
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<td>1981</td>
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<tr>
<td>1988</td>
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<tr>
<td>1989</td>
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</tbody>
</table>

Note.—Citations are in the courts of appeals, district courts, and state courts. For citations to the *New York Times*, we searched for "N.Y. Times," the prescribed *Bluebook* citation form, and not for "New York Times," in order to exclude case names, such as New York Times Co. v. Sullivan, 376 U.S. 254 (1964), New York Times Co. v. United States, 403 U.S. 713 (1971), and so on. This likely produces a nonskewed undercount (citations spelling out the full name of the newspaper are omitted), which we deemed preferable to the skewed overcount that using the full name would have produced. For the *Los Angeles Times*, we used "L.A. Times," and for the *Washington Post*, we used "Wash. Post."
States, which as a government document we had classed as “legal” in our other counts. Here we looked at the number of citations per year, for all courts (see Table 5).

All of this appears to reinforce what emerged from the Supreme Court data, that there has been a noticeable increase in citation to nonlegal material in all courts, that citations to newspapers account for a significant portion of this increase, and that the increase is a phenomenon that dates from no earlier than the early 1990s. Yet, as we have noted earlier, this might have been explained by an increase in secondary citation generally. If courts were more inclined to cite to material other than constitutions, codes, regulations, and cases, this rising tide in secondary citation might have raised the level of citation to secondary nonlegal material as well. In order to investigate this possible explanation for the rise in nonlegal citation, we
TABLE 5

CITATIONS TO STATISTICAL ABSTRACT OF THE UNITED STATES, PER YEAR (All Courts)

<table>
<thead>
<tr>
<th>Period</th>
<th>Citations per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970–80</td>
<td>6.8</td>
</tr>
<tr>
<td>1981–90</td>
<td>13.8</td>
</tr>
<tr>
<td>1991–93</td>
<td>14.0</td>
</tr>
<tr>
<td>1994–96</td>
<td>18.7</td>
</tr>
<tr>
<td>1997–98</td>
<td>19.5</td>
</tr>
</tbody>
</table>

TABLE 6

CITATIONS TO MICHIGAN LAW REVIEW AND STANFORD LAW REVIEW (All Courts)

<table>
<thead>
<tr>
<th>Period</th>
<th>No. of Citations</th>
<th>Average Citations per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971–75</td>
<td>1,205</td>
<td>241.0</td>
</tr>
<tr>
<td>1976–80</td>
<td>1,541</td>
<td>308.2</td>
</tr>
<tr>
<td>1981–85</td>
<td>1,536</td>
<td>307.2</td>
</tr>
<tr>
<td>1986–90</td>
<td>1,188</td>
<td>237.6</td>
</tr>
<tr>
<td>1991–95</td>
<td>898</td>
<td>189.6</td>
</tr>
<tr>
<td>1996–98</td>
<td>517</td>
<td>172.4</td>
</tr>
</tbody>
</table>

**Note.**—We used the Michigan Law Review and the Stanford Law Review rather than the Harvard Law Review, Yale Law Journal, and Columbia Law Review, because those in the latter group, using a LEXIS search, all produced counts greater than 1,000, which LEXIS would not enumerate.

looked at the citation trends for a selection of different “standard” secondary sources and obtained the results shown in Tables 6 and 7.

This last set of findings, in Tables 6 and 7, appears most surprising. Although it would have been reasonable to suspect that the rise in citation to nonlegal materials is attributable to more pages of opinions or to more law clerks or to more citations generally, we saw earlier that this was not the case. And although it would have been even more reasonable to suspect that the rise in citation to nonlegal materials is attributable to a rise in the citation of secondary sources generally, not only is this not the case, but the trend in citation to “standard” secondary sources appears to be decreasing.
### TABLE 7

**Total Citations and Citations per Year (in Parentheses)**

<table>
<thead>
<tr>
<th>Period</th>
<th>Corbin*</th>
<th>Loss*</th>
<th>Wigmore*</th>
<th>Areeda*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971–75</td>
<td>1,660 (332)</td>
<td>310 (62)</td>
<td>3,090 (618)</td>
<td>17 (34)</td>
</tr>
<tr>
<td>1976–80</td>
<td>2,586 (517)</td>
<td>213 (43)</td>
<td>3,127 (625)</td>
<td>166 (33)</td>
</tr>
<tr>
<td>1981–85</td>
<td>4,145 (829)</td>
<td>136 (27)</td>
<td>2,677 (535)</td>
<td>325 (65)</td>
</tr>
<tr>
<td>1986–90</td>
<td>4,815 (963)</td>
<td>172 (34)</td>
<td>2,125 (425)</td>
<td>281 (56)</td>
</tr>
<tr>
<td>1991–95</td>
<td>3,808 (762)</td>
<td>101 (20)</td>
<td>1,686 (337)</td>
<td>223 (45)</td>
</tr>
<tr>
<td>1996–98</td>
<td>1,715 (572)</td>
<td>66 (22)</td>
<td>807 (269)</td>
<td>154 (51)</td>
</tr>
</tbody>
</table>

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*We searched for the name "Corbin," which of course locates people named Corbin, even if they have not written treatises on contract law. Because we have no reason to believe that the name Corbin, unlike the first names "Jason," "Megan," "Irving," or "Hilda," has changed in frequency over time, the results of this search likely produce an overcount that is consistent over time, and thus the trend appears accurate.

*Search was for Loss (and Loss and Seligman) on Securities Regulation.

*A scan of individual citations indicates that, unlike Corbin, no one (in the reported cases) other than the Wigmore who wrote about evidence has either the first or last name Wigmore.

*Search was for Areeda on Antitrust.

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...even as the output of the courts in general is increasing. If we can assume that the total number of published opinions for all courts is increasing, which seems a safe assumption, then the decreases displayed in Tables 6 and

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16 Part of the decrease in citations to law reviews is likely due to a perception by judges, even if not necessarily shared by their clerks, that the material now being produced by law reviews, especially the major national law reviews, is less useful to judges than the material produced by the same law reviews in the past. See Richard A. Posner, The Problematics of Moral and Legal Theory 191, 295–303 (1999); Harry T. Edwards, The Growing Disjunction between Legal Education and the Legal Profession, 91 Mich. L. Rev. 219 (1992). This would explain some of the decline in law review citation but not the decline in standard treatise citation. The decline in the latter, however, might be explained by the fact that the law clerks, the same people who have produced in their recent past the arguably less relevant material in the law reviews, are for the same reason less inclined to look to standard treatises and other doctrinal secondary material in producing their work product for the judges by whom they are employed. It is also the case that jurisprudential changes, seen as an independent variable, could produce changes in the information that judges seek. See, for example, Michael H. Koby, The Supreme Court’s Declining Reliance on Legislative History: The Impact of Justice Scalia’s Critique, 36 Harv. J. on Legis. 369 (1999). Thus, an increased taste for empirical information, as Judge Posner, most prominently, has urged (Posner, supra; Richard A. Posner, Overcoming Law (1995)), could explain part of the increase in citation to nonlegal material. Our sense, however, not yet tested, is that in most of the cases in which a nonlegal source is used to support an empirical claim, it is not because the empirical claim is a new feature of legal justification. Rather, in the past the empirical claim would simply have been asserted, as when, to make the comparison with the citation of How to Buy and Care for Tires, the Supreme Court of New Jersey maintained without nonlegal citation in 1980 that “[t]here is a matter of common knowledge, judicially recognized, that tires can and will blow out for a myriad of reasons including defect, lack of tire maintenance, road conditions and the happenstance of striking damaging objects.” Gladden v. Cadillac Motor Car Division, General Motors, 83 N.J. 320, 416 A.2d 394, 401 (1980).
7 underestimate the extent of the decrease in citation to standard types of secondary materials.

In order to provide a further check on this conclusion, we did a search for references to "Justice Holmes," suspecting that this, as much as anything, was the canonical reference to a traditional source of authority. The results are given in Table 8.

Although some of this decline is plainly attributable to depreciation, the decline in the last 5 years in references to "Justice Holmes'" still punctuates a series of remarkably consistent findings. In the face of a moderate to heavy decline in the citation to a large variety of traditional legal materials, there has been a moderate to heavy increase in the citation to nonlegal materials, an increase that accordingly does not appear to be explainable in terms of an increase in citation generally, an increase in opinion volume generally, or an increase in secondary citation generally. What appears to be a substantial increase in the proportion of nonlegal citation is confirmed by our closer examination of the citation practices of the Supreme Court of New Jersey. In 1950, the four citations to nonlegal materials constituted only 2 percent of its citation to secondary material; in 1960, the court's cita-

18 All of the searches we conducted are described in this article, and thus none of the searches we conducted produced contrary results.
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...tion to nonlegal materials constituted 6.9 percent of its citation to secondary materials; and in 1970 this had dropped back to 4.8 percent of total secondary citation. By 1990, however, that figure had risen to 11.5 percent, and in the years between 1990 and 1998 this figure had risen to 17.9 percent.

Looking more closely at New Jersey provides a more textured understanding of the nature of the changes. In 1950 and 1960 the citation to nonlegal material was overwhelmingly to annotations in American Law Reports (ALR), legal encyclopedias such as American Jurisprudence and Corpus Juris Secundum, Restatements, traditional legal treatises such as Appleman on Insurance, McQuillan on Municipal Corporations, McCormick on Evidence, and Larson on Workmen’s Compensation, and occasional citations to law review articles, usually ones of New Jersey orientation and usually published in the Rutgers Law Review. The nonlegal sources, few as they were, were mostly to nonlegal dictionaries, standard statistical sources, and textbooks on subjects such as accounting and internal auditing. By 1990, however, the legal secondary sources had demonstrated a significant transformation. There were fewer citations to ALR, fewer citations to legal encyclopedias, approximately the same number of references to legal treatises, and a significant increase in the citation of non–New Jersey law review articles. And in 1990 the nonlegal citations still included some number of citations to nonlegal dictionaries and encyclopedias, but most of the increase was in citation to nonlegal journals such as Educational Policy and the Journal of the American Planning Association. Once we arrive at 1998, however, the nature of the nonlegal citation has changed substantially. As in 1990, but unlike 1950 and 1960, the legal citation is heavily dominated by law reviews published outside of New Jersey, but now the nonlegal citation, greater in absolute numbers and in proportion of secondary citation, is much more heavily weighted by citations to daily newspapers. And these newspapers are not only local ones such as the Trenton Times and the Newark Star-Ledger, but also national ones, as with an article on the nature of whistle-blowing from the New York Times and, from the Washington Post, “Ugly Horseshoe Crab May Have a Future to Match on Delaware Bay.”

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19 Thirty-nine out of 565, based on an examination of 100 percent of the cases for the year.
20 Six out of 126, based on an examination of 66 percent of the cases for the year.
21 Twenty-eight out of 243, based on an examination of 100 percent of the cases for the year.
22 Sixty out of 336, based on an examination of 100 percent of the cases for the year.
IV. THE INCREASED AVAILABILITY OF NONLEGAL INFORMATION

Even after we exclude the hypotheses of increased citation generally, increased citation to secondary material generally, increased volume of opinions, and increased staffing, there remain several possible explanations for the phenomenon we have identified. One explanation might be a change in the culture the produces lawyers, judges, and law clerks, such that the members of this culture find it increasingly important to look to a wider range of materials. If law is increasingly seen necessarily to involve a wider range of facts and norms than has traditionally been supposed, then it would not be surprising to discover that those influenced by this transformation in understanding would increasingly venture further afield in their search for the information relevant to legal decision making.

Although we do not deny what appears to us to be the partial truth of this explanation, this explanation seems incomplete. In the first place, it might have suggested that the substantial increase we see in nonlegal citation would have started earlier. By the early 1980s, major American law schools were hiring significant numbers of people with doctoral degrees in other disciplines, sometimes without law degrees. Similarly, legal scholarship had by the early 1980s become substantially interdisciplinary. Indeed, a very preliminary search of citations in law reviews indicates that references to Pareto, Nozick, Rawls, and the like increased sharply between the early and the late 1980s but leveled off thereafter. And given that law clerks are typically right out of law school or no more than 2 years away, if the major explanation was related to something happening in law schools we would have expected to see the sharp rise much earlier than was in fact the case.

Moreover, the phenomenon of increased interdisciplinarity in law schools would not appear to explain the greatly increased references to daily newspapers, popular books, and a large amount of other extralegal information that looks as far away from the kind of interdisciplinary work done in law schools as it does from the traditional canon of legal information. The change in the law school culture, and thus the law clerk culture, might explain a rise in citation to the American Economic Review or the Journal of Philosophy but not the rise in citation to the Los Angeles Times or books like How to Buy and Care for Tires.

If this is so, then what likely remains is that the increased ease of access to nonlegal information is a large part of the explanation. If one can find

\textsuperscript{23} From quite different starting points, this is one of the points central to, for example, Ronald Dworkin, Law's Empire (1984); and Posner, Overcoming Law, supra note 16.
newspaper articles easily through Westlaw, NEXIS, or the Internet, if one can go from legal to nonlegal databases as easily as going from one legal database to another legal database, if one can use the same search engines and strategies for locating nonlegal information as for legal information, then it should come as no surprise that the cost of access to nonlegal information has been lowered substantially and that the frequency has risen as a consequence.

To be somewhat more specific, we believe that, having excluded most other explanations for the phenomenon we have identified, two features of the changing world of legal information have produced the changes we document. The first is the economic integration of the legal publishing industry. If this integration had simply been limited to mergers and acquisitions among legal publishers, it might have been expected to have little effect on the nature of law's informational domain. But, much more important, the chief vehicle for this integration has been the acquisition of law publishers by publishing conglomerates whose publishing enterprise ranges far beyond the domain of legal information. The West Publishing Company is now part of the Canadian-based Thomson publishing conglomerate, which has also acquired a number of other legal publishers, including the Lawyers Cooperative Publishing Company, Bancroft-Whitney, and the Research Institute of America, the latter itself having previously acquired Prentice-Hall. Reed-Elsevier, a Dutch-based and informationally diverse publishing conglomerate, not only owns half of LEXIS-NEXIS but has also acquired three other large law publishing companies—Butterworth's, Michie's, and (half of) Shepard's Citations. Kluwer, another Dutch-based company, and one with a large stable of scientific, technical, and academic publishing enterprises, has acquired the legal publishing division of Little, Brown, and Company, as well as the Commerce Clearing House, publishers of legal and financial information. And Times-Mirror, which started as the Los Angeles Times but is now much more, includes within its diverse portfolio of enterprises both the law publishing company Matthew Bender and the other half of the aforementioned Shepard's Citations.

That a significantly larger number of legal publishing houses have now been consolidated into only four within the past 5 years is itself noteworthy, but two features of these four enterprises are particularly important for our purposes. First, three out of the four are non-American companies with an undeniably international scope and scale of operations. Second, each of the four publishes a great deal other than law, and thus, for each of the four, law publishing is but one component of a much larger, much more diverse, and thus much less limited information distribution enterprise. We might hypothesize, therefore, that the very boundary between law and nonlaw that
the previously law-specific West Publishing Company had a strong interest in protecting is a boundary that Thomson, which now owns West, has an equally strong interest in tearing down. If lawyers and judges could be encouraged to become consumers of Thomson's nonlaw products, for example, and if Thomson's nonlaw customers could be encouraged to become consumers of Thomson's newly acquired law products, the most obvious winner appears to be Thomson itself.

As we have suggested, this restructuring of the law publishing industry has been accompanied by, and appears to have helped to promote, the second phenomenon we find noteworthy and likely explanatory, the phenomenon we label "database integration." In the traditional hard-copy world of the law, and also in the earliest era of full-text databases, the location and access of nonlegal information was quite difficult. Legal indexing systems, of which the West Key Number System was the most prominent, were unconnected with other informational indexing systems. Law libraries had few nonlegal materials except for standard reference works such as dictionaries and encyclopedias, and law libraries themselves, both in courthouses and in universities, were physically distinct from more general libraries. If in 1973 one were doing legal research in the Social Law Library (located in the same building as the Massachusetts Supreme Judicial Court and the Suffolk County Superior Court) or in the Court of Appeals Library (located in the same building as the United States Court of Appeals for the First Circuit and the United States District Court for the District of Massachusetts), and if one desired in connection with a case to consult back copies of the Boston Globe or reference works on the footwear industry, one would have had to leave the building and take public transportation to the Boston Public Library at least a mile away.24 As can be expected, this provided a substantial disincentive to leaving the limited domain of legal information, and in most instances the disincentive was sufficient to produce briefs, arguments, and judicial opinions limited to information and sources likely to be available in the typical law library.

Now, however, the world of information readily available to lawyers and judges is vastly larger. Even apart from the on-line catalogs that make full university collections far more available than ever before to a person physically standing in the law library, there has been a dramatic change in what is available to the typical LEXIS or Westlaw subscriber in a law firm, court, or government agency; and Internet access multiplies the phenomenon even further. There is now a dramatically accelerating increase in the availability

24 This account is based on personal experience of one of the authors.
of nonlegal sources accessible through on-line information methods. These nonlegal sources include local and national newspapers, nonlegal periodicals, a far larger universe of government documents, transcripts of radio and television programs, numerous nonlegal academic journals, and much more. By way of illustration, the Winter/Spring 1996 edition of the Westlaw Database List runs to 238 pages of text, not including the index, and contains, for example, 265 databases covering nonlegal newspapers and related news sources, 41 databases on public filings at the state, local, and federal levels, and 826 databases from nonlegal magazines, newsletters, trade publications, and news services, including such decidedly nonlegal publications and databases as Idaho Farmer, Baseball Weekly, Screen Digest, Ward's Auto World, Footwear News, and transcripts from broadcasts such as Rivera Live and Eye to Eye with Connie Chung. What all of this suggests, therefore, is that in previously barely imagined ways the universe of nonlegal information is now easily and cheaply available to lawyers, judges, and other legal decision makers. What once would have required a 2-hour journey now requires only the click of a mouse, and this may well provide the most persuasive explanation of the phenomenon we have identified.

V. DOES CITATION INDICATE RELIANCE?

Although perhaps more appropriate to a footnote, we use this brief section to emphasize that we have been examining citation, or what journalists might call "sourcing," rather than reliance. We make no claims that the material cited has in fact influenced the judges doing the citing, and we are not so naive as to discount the substantial possibility that nonlegal citation is a form of window dressing for decisions reached on other grounds. Not in our wildest imagination do we suppose that How to Buy and Care for Tires had a scintilla of effect on the outcome in Kumho.

Yet everything we say in the previous paragraph could apply to legal citation as well, and to the citation of cases, statutes, constitutional provisions, treatises, law review articles, and numerous other parts of the standard legal canon. So although we venture no views on what we might call the Legal Realist hypothesis, it is important to note that there seems no reason to believe that the Legal Realist hypothesis is any more true about nonlegal information than it is about legal information. Citation might be mere window dressing, but is there a reason to believe that nonlegal window dressing is any different causally than legal window dressing? To put it differently, we claim that identifying the nature of nonlegal citation is as agnostic on the causal issue as is identifying the nature of legal citation. But if citation
says anything, then what it says about nonlegal citation is no less potentially interesting than what it says about legal citation.

So even if it is the case that citation says little if anything about what produces legal judgments, it might still be important to think about why judges would think it important or useful to justify their judgments in terms of nonlegal materials much more than has been the case in the past. Citation may say little about what produces legal results, or so the Legal Realists believed, but citation to this rather than that may still say a great deal about changes in the culture that makes certain citations respectable at certain times rather than others.

VI. The Delegalization of Law

Regardless of whether citation indicates causation, therefore, it certainly signals and creates an understanding of the nature of law that is worth thinking about. We have until this point been treating nonlegal citation as the dependent variable, and we have been trying to look for the causes. But if instead we treat nonlegal citation as the independent variable, we might with even more speculation wonder what the phenomenon of increased nonlegal citation will say about future trends in citation, in the larger world of legal information, and in the even larger world of law itself.25

A hallmark of modern and complex societies is what the German social theorist Niklas Luhmann refers to as “social differentiation.”26 While in simpler societies people performing different functions might still have had the same education and knowledge base, spoken the same language, and traveled in the same professional and social circles, the differentiated society is one in which this social integration breaks down. In its place, the various functions become their own subcultures, complete with a functionally differentiated language, functionally differentiated education and acculturation, functionally differentiated factual knowledge as well as skills, and a full mechanism of functionally differentiated institutions.

One of the most important features of law’s traditional differentiation has been its informational autonomy. In many respects legal decision making is highly information dependent and was traditionally dependent on a comparatively small universe of legal information, a universe whose boundaries were effectively established, widely understood, and efficiently patrolled.


Yet if, as we have shown here, these boundaries are breaking down, does this suggest that the differentiation between legal information and nonlegal information is itself breaking down? And if this is so, and if the concept of law is itself an informationally soaked concept, then does the breakdown of the line between the legal and the nonlegal with respect to information presage a breakdown in the line between the legal and the nonlegal with respect to law itself? This is the idea we refer to as the "delegalization of law," and the changing pattern of citation we have identified seems one sign of this growing phenomenon. There are others as well, but exploring all of them must wait for another day.