THE HAZARDS OF PRECEDENT: A PARAMETERIZATION OF LEGAL CHANGE

Charles N. W. Keckler

05-36

LAW AND ECONOMICS WORKING PAPER SERIES

An electronic version of this paper can be downloaded from the following website:
Social Science Research Network: http://ssrn.com/abstract_id=840224
THE HAZARDS OF PRECEDENT:
A PARAMETERIZATION OF LEGAL CHANGE

CHARLES N. W. KECKLER

The overruling of prior caselaw is one of the most dramatic events in a common-law system. Unsurprisingly, therefore, the rate of overrulings is often considered an important measure of legal change. To measure this process more precisely, and to determine the variables governing it, a method is presented for the rapid collection and analysis of all binding precedents within a jurisdiction (in this prototype study the approximately fifty thousand substantive opinions of the Illinois Supreme Court between 1819 and 2005). From this study population, the 721 cases that have “failed,” becoming no longer good law, and the cases or other processes causing them to fail, can be quickly separated and analyzed in order to identify factors predicting the relative durability of a judicial opinion. Given that 413 cases have thus far been overturned within the population, a long-term trend suggests the overall chance of being overruled converges toward approximately 1%, but certain types of precedents are at significantly greater risk, and certain periods of court history expose all precedents passing through them to elevated hazard. Application of engineering and epidemiological techniques of survival analysis and logistic regression allows specification of the time-dependent risk of failure experienced by a precedent. Quantification of certain factors that lower or raise the odds of failure, such as being issued with a dissent, or containing a rule of criminal law, is also possible. In addition, any concentration of precedent “mortality,” when controlled for intrinsic characteristics of the precedents at risk, is a reliable indicator of an unusually hazardous judicial environment. In this Illinois population, such an environment existed between approximately 1950 and 1964, when here appears to have been a reevaluation by the court of its relative responsibility vis-à-vis the legislature for the correction of court-generated rules perceived as suboptimal but not clearly erroneous; this is correlated with, but not driven by, a change in the norm of stare decisis. A simple mathematical model relates the apparent shift in the level of self-correction with a spike in legal instability, followed by a higher equilibrium rate of court overruling. The use of logistic regression and related statistical techniques, combined with automated generation and coding of citation databases, appears to be a promising method for diagnosis of court dynamics, understanding episodes of legal change, and estimating the relative likelihood that a current rule of law will eventually be overturned.

* Visiting Assistant Professor, George Mason University School of Law, ckeckler@gmu.edu. Ph.D. (all but dissertation, Human Evolutionary Ecology), University of New Mexico; J.D., 1999, University of Michigan; M.A. (Anthropology), 1992, University of Michigan; A.B., 1990, Harvard College. Initial research for this paper occurred during my residence as John M. Olin Fellow at Northwestern University School of Law. Further support during the preparation of the paper was provided by George Mason University School of Law.
I. INTRODUCTION

There are many ways to study legal change. Every lawyer studies it at the most concrete level, by reading decisions and statutes that establish one legal rule in place of another legal rule. For any particular instance of legal change, there may be a great deal of information regarding what led to the change, why the change happened as it did, and why that particular new rule was announced to replace the old rule. A notable example is the rule from Brown v. Board of Education that segregated schools are forbidden by federal law, which replaced the rule of Plessy v. Ferguson that segregated facilities (implicitly including schools) are permitted by federal law. Whole careers and numerous volumes have been devoted to understanding in great detail this change. Nevertheless, legal change as a general phenomenon is deeply puzzling, and although not ignored, is much less studied in comparison to the sum total of thought devoted to specific legal changes (a literature comprising a considerable portion of all legal commentary). This is despite what has been recognized as the absolutely central role the dynamics of change have for jurisprudence, because how law comes into being,

---

1 George L. Priest, Measuring Legal Change, 3 J. L. ECON & ORG. 193, 195 (1987) (quoting FREDERICK POLLOCK & FREDERIC WILLIAM MAITLAND, 2 THE HISTORY OF ENGLISH LAW FROM EDWARD II 561(1890)).
disappears, remains, and changes must tell us to a considerable degree what law is
generally, and about the varieties of form it may take.\(^2\)

One of the difficulties in this area is perhaps most basic, in that there is no agreed
upon measurement of legal change. Put most simply, if one is engaged in the process of
explaining legal change, it is necessary to define this dependent variable – and it must
be a variable, because it would be quite improper to assume constancy, and thereby
assume away one of the great debates about legal change.\(^3\) Therefore, there must be
some method, some measurement, whereby values can be attached to this variable.
Until this is done, the myriad explanatory variables one can present as determinants of
legal change remain difficult to validate.

Consider a comparable question in social science. How much has American
politics changed since 1950? One could have various measures of political change or
perhaps an index of several different factors. One could measure, for instance, the
changes in party identification that have taken place; these could be related or
combined with a measurement of changes in the party identification of various elected
bodies such as the federal or state legislatures. Alternatively, one could conceive of
politics in an ideological way, and attempt to go back, period by period, and determine

\(^2\) “Only the driest and most formalistic of jurisprudential theories takes a mere snapshot of law, dealing
with it as if it came from nowhere and is going nowhere.” Herbert Hovenkamp, *Evolutionary Models in
and the Problem of Doctrinal Change*, 79 Or. L. Rev. 527, 527-528. ("The central challenge of jurisprudence is
to probe the dynamics of legal doctrine as a process.") (reviewing literature on the causes as well as the
velocity of legal change).

\(^3\) See Priest, *Measuring Legal Change*, supra note 1, at 196. Priest reviews the debate among legal historians
and theorists over whether law changes at an essentially constant rate, or if its dynamics are more
complex and involve periods of significantly greater and lesser transformation. Properly defined, these
hypotheses should be empirically distinguishable, and because a long tradition of scholarship has relied
upon an assumption of a fixed rate of change, there is significant amount of material that could be
falsified by this effort.
the level of "conservatism" or "liberalism" (as reported on surveys and so forth) in the electorate and/or the officials they elect. I have no idea precisely what measurement is best; such discussion is best confined to a different article by a different person. What I can assert is that any explanation of why American politics has changed is greatly aided, at the very least, by a measurement and specification of that change, or in the inelegant phrasing of social science, an "operationalization" of what is to constitute "politics" and what is to constitute "change" are prerequisites of quantitative and testable models of political change.

In order to engage in operationalization in the legal realm, it is probably necessary to take a rather crabbed definition of law that will satisfy no one. (Since it does not satisfy even me, it would be surprising if others liked it better). Given that the investigation takes place within a common law jurisdiction, an examination of case law and dynamics within case law offer an analytically tractable definition. This ignores statutes and constitutions as sources of law, and as themselves targets of change; although any serious measure of legal change would ultimately have to take into account the changes that occur within these (and the interactions these changes have with case law). Instead, it restricts itself to one source of law, albeit an important one, the court, and focuses on a definable judicial institution, a final common-law court generating an associated set of norms backed by its authority. The amount of "law" (so delimited) a jurisdiction can be said to have is the total body of valid, binding,

---

precedent – a constantly expanding number, even if one limits this further to the opinions produced by the highest court in a jurisdiction.

This body of law has been characterized as “the collective and collected wisdom amassed over decades, of an appellate bench consisting of the number of decisions.”\(^5\) More neutrally, it can be considered as a jurisdiction’s “legal capital,”\(^6\) one form of it in any event, employed by the jurisdiction to regulate behavior and resolve disputes. Like other forms of capital, the usefulness of a particular precedent will usually decline over time, a decline that has been estimated for the cases of the Supreme Court of the United States (SCOTUS) at 6.5% yearly.\(^7\) As the epigraph to the Article suggests, the normal fate for precedents is not in fact “death,” since they continue to remain on the books and at least hypothetically accessible as legal authority. Rather, most legal precedents enter into a decrepit state of “old age” or more precisely they become moribund and inactive.

To paraphrase, old precedents never die, they just fade away.\(^8\) Because of this feature, among others, legal precedents are quite unlike living organisms, pace Pollock

\(^5\) Gregory A. Caldeira, The Transmission of Legal Precedent: A Study of State Supreme Courts, 79 AM. POLI SCI. REV. 178,183 (1985). Caldeira used the number of “running feet of legal reports each state supreme court has produced from its inception until 1970” but acknowledges he would have preferred to use the number of decisions. Because the perspective taken here is that the nature of legal capital is the production of legal norms, this latter enumeration makes more sense, and it is in effect necessitated by the manner in which decisions are acted upon in a common law system. All norms are embodied in cases, and it is the case which is cited, adhered to, or departed from. Theoretically, one could attempt to dissect cases into their relevant holdings and trace these separately, but as a practical matter, even a case only overruled in part is unlikely to have much vitality left. It would seem likely that its adhered-to elements are carried forward by reference to successor cases not containing the overruled element.


\(^8\) The origin of this slightly clichéd construction is a bit mysterious. It was certainly popularized by General Douglas MacArthur in his address to Congress. 97 Congressional Record, 4125 (Apr. 19, 1951) (“Old soldiers never die, they just fade away.”) Apparently, MacArthur may have been paraphrasing a military parody, popular in his youth, of a mawkish nineteenth century hymn called “Kind Words Can Never Die.” See RESPECTFULLY QUOTED: A DICTIONARY OF QUOTATIONS (1989). Since of course soldiers do in fact die, the claim has rather more validity for law than it does for military personnel.
& Maitland, and it is important to avoid taking any biological analogies about their “life course” too far. This admonition is especially worth making here as the Article explores the utility in legal analysis of certain formal methods such as “survival analysis” that are most commonly employed in the life sciences. Legal cases do have formal similarities with, say, patients of differing vulnerability, who are subjected to different courses of treatment and who are then evaluated for how long they “live.” But overblown analogies can mislead.

If analogies are required, it may be useful to compare legal precedents to other forms of durable capital, such as automobiles. Like cars, precedents are produced in multiple varieties, and used in various ways. Depending in part on how well they are engineered, they last a longer or shorter period of time; in addition, if cars are subject to more dangerous road conditions, they are more likely to break down. However, most vehicles find their end not in fiery collisions with other vehicles, but in gradual disuse, and then relegation to the junkyard, where they rust away, possibly used for the odd spare part now and then. The purpose of this Article is thus better understood as

---

9 For instance, Justice Jackson once claimed somewhat ironically: “It might be thought that if any law is to be stabilized by a court decision it logically should be the most fundamental of all laws … [but] constitutional precedents are accepted only at their current valuation and have a mortality rate almost as high as their authors.” Robert H. Jackson, The Task of Maintaining Our Liberties: The Role of the Judiciary, 39 A.B.A.J. 961, 962 (1953). There are certain insights contained in this statement, but as a reflection of demographic reality it is completely overblown. The vast majority of the constitutional precedents generated by the SCOTUS during Jackson’s tenure “live” on today, while Jackson and all his colleagues long ago passed into the great unknown.

10 It would be difficult, for example, to treat precedents as “reproducing” unless one pointed out “descendant” cases citing numerous sources of authority have many “parents.” Likewise, it is implausible to directly apply the analogy of precedents “competing” in some sort of semi-autonomous way for representation in the future. Contra Michael S. Fried, The Evolution of Legal Concepts: The Memetic Perspective, 39 Jurimetrics J. 291, 307 (1999). Precedents and subsequent cases relying upon them are not replicas of one another, and cases regularly used as authorities (a small sub-sample) are at the same time those cases a commonsense perspective will deem as most important and successful, and yet also those which a system may reevaluate and possibly overturn. Moreover, such cases are often part of the dialectic by which the law progresses toward a new and possibly improved set of rules. When death is correlated with “success,” we have moved beyond where a biological analogy is helpful.
subjecting law to something like “an engineering interpretation” advocated by Roscoe Pound long ago. Engineers, like doctors, subject their work to the kind of “failure analysis” used here to study law, attempting to determine the intrinsic and extrinsic factors that affect the “active lifespan” of a product. The simple replacement of “rust” with “dust” does not make this analogy perfect by any means – unlike vehicles, “failure” of precedent generally connotes the substitution of an alternate precedent, and is motivated by the perceived superiority of that substitute. However, it serves to underline the point that precedents are crafted entities, whether made poorly or well, are designed for the fulfillment of an economic need, and may be subject to hard use or the turn of social fashion against them. All these traits are likely to affect how subsequent history treats a case and the rules of law embedded within it.

Given this basic working concept of law, we can proceed to consider the nature of legal change. The most obvious source of change is the daily accretion of new cases added to the corpus of common law. While most of this “change” consists of the record of applications of prior law, rather than the enunciation of new rules, it probably should not be discounted as not being “real change;” having more cases on point is a change, as is putting a rule in place where there were formerly no rules. Nevertheless, the focus of most concern has been on “change” in the sense of “exchange” – trading one rule for another. This process involves the removal of one legal norm with a corresponding replacement by another, that is, an overruling or similar action. Despite the caveats expressed, overruling is defensible as a metric of legal change, and has long been so.

11 ROSECO POUND, THE SPIRIT OF THE COMMON LAW 195 (1921). Unlike Pound, I make no attempt here to analyze what laws should do, or even what they are doing, the goal being to observe their obvious malfunctions when they implode in the process of doing whatever it is we are trying to have them do.
regarded, because “[o]verruling behavior provides a direct measure of interpretative stability.” Moreover, it has the considerable virtue of being relatively simple, and largely independent of the judgment of the analyst as to whether legal change has occurred or how important the legal change might be.

Overruling should not be equated with change itself; it is a measure of one kind of change, namely substitutive change, occurring in one of the repositories of legal authority. It corresponds to what we say when we say an institution "changes its position," although this assumes there was a position to change; thus the amount of law continues to change by growth, but within the body of law, there is a measurable and variable amount of stability, as assessed by the rate at which norms are actively removed from authoritative status. Aside from the methodological excuse that the definitions used here can always be built upon, another justification for a narrow definition is that, to the extent this narrow definition is correlated with the "real" rate of legal change, measurements at different time periods and in different jurisdictions

---

12 Stefanie A Lindquist & Kevin Pybas, State Supreme Court Decisions to Overrule Precedent, 20 JUST. SYS. J. 17, 19 (hereafter Lindquist & Pybas). Although I was unaware of this useful article before beginning this research (it has in fact never been cited as of 9/2005 in the Westlaw database), the authors plausibly claim they are the first to engage in “any systematic study of the overruling behavior of state supreme court justices.” The idea that this is an important metric of the judicial system (or would be if anyone used it), is, however, an old one. See William O. Douglas, Stare Decisis, 49 COLUM. L. REV. 735, 739 (1949) (“One measure of stability is the extent to which precedents are overruled.”) Other recent work along these lines outside the SCOTUS context includes Allen Lanstra, Jr., Does Judicial Selection Method Affect Volatility?: A Comparative Study of Precedent Adherence in Elected State Supreme Courts and Appointed State Supreme Courts, 31 Sw. U. L. REV. 35, 55 (2001) (hereafter, Lanstra) (looking at recent overruling practice in 10 states); Jeffrey T. Renz, Stare Decisis in Montana, 65 MONT. L. REV. 41, 56 (2004) (hereafter Renz). Although he focuses on Montana, Renz uses a limited range of comparative data from other states possessing a similar court structure (where an intermediate appellate court is lacking), and unlike Lanstra or Lindquist & Pybas, makes use of computer based case retrieval method containing elements like the one used here, although apparently considerably more labor intensive. See id. at 60 & n.48.

13 See, e.g., Jim Chen, Judicial Epochs in Supreme Court History, Sifting Through the Fossil Record for Stitches in Time and Switches in Nine, 47 ST. LOUIS U. L.J. 677, 721 (2003) (“One of the simplest measures of doctrinal activity is to count the number of decisions per Term that overrule previous decisions of the Supreme Court.”).
provide at least a relative sense of legal dynamics independent of the precise nature of the measure.\footnote{14} In addition to overruling there are various sources of “normative instability” within case law, including reconsideration, reversal by a higher court (if any), and alteration of the norm by a different institution responsible for statutory or constitutional law. Some of these, like vacatur or reversal by a higher court, do not result in a replacement norm, and therefore, although contributing to rate at which precedents can be said to fail, they are less certain guides to the type of normative instability most associated with change in the very strict sense just discussed. This sort of “legal change,” the prime but not exclusive focus of the present study, is represented by the repudiation by an institution of its own norm, classically termed an “overruling” in the case of a common-law court, although a court may use other formulations that amount functionally to a refusal to acknowledge a prior announced norm as authoritative in the area it purports to cover. What matters is this rendering of a norm as no longer enforceable and binding, and the frequency with which norms lose authoritative status is what will be used as the measure of internal normative stability.

\footnotetext{14}{By contrast Priest supposes that the proper measure of legal change is a behavioral index of increased legal uncertainty among litigants, although he admits the data to determine this will only be available in selected instances. \textit{Measuring Legal Change}, supra note 1, at 202. His estimate has the useful property that it can measure not just a change but the intensity of the change, as a rule may be replaced by a quite similar rule, thus creating little on-the-ground legal adjustment, or by a quite different rule, causing considerable legal change. In the measure employed here, these are treated equivalently as measures of legal change, so it is worth being cautious about a behavioral interpretation attached to these measures. Nonetheless, assuming intensity of legal changes is evenly distributed, the raw measure of overruling would still provide a measure of the sort of uncertainty examined by Priest, even without a scale for the extent overruling cases actually deviate from the cases they overrule.}
Internal normative stability is intended as a nonspecific concept, but which in practice would be denominated as being of some jurisdiction of some body of norms.\(^\text{15}\)

Most of the prior empirical research into the determinants of legal change has focused the United States Supreme Court,\(^\text{16}\) a unique institution, and although its attraction to commentators is obvious, it will inevitably leave them with a sample size of one. The SCOTUS is clearly an unusual and biased sample, rather unlike any other court in the nature of its cases, and abnormal in its tenure and probably dynamics.\(^\text{17}\) An additional problem is that the fractured style of opinion making on the Supreme Court often leads to spirited commentary over whether and when prior cases have indeed

\(^{15}\)The norms need not be legal; you could measure in theory the internal normative stability of rules of etiquette for example. There is two-part definitional problem with using nonlegal norms, however. First, what qualifies as a norm or not will be much less clear because most nonlegal norms by their nature lack an authoritative list, and this makes it all the more difficult to tell, for example, when it no longer became de riguer for men, when walking in mixed company, to walk upon the sidewalk nearest the street (to shield women from mud thrown from vehicles, perhaps); people may not agree that they ever had to do this, and some may claim they still must. Second, the study of nonlegal norms is complicated by the fuzziness of the population over whom they have authority; that is, there is no jurisdiction for the rule that a baker give an extra item to a person buying 12 of something (a "baker’s dozen"), so assuming this rule has decayed, it is difficult to tell how much has occurred unless one limits one’s self to an arbitrary location, like Chicago, and then writes a dissertation on e.g., “The Decline of the Baker’s Dozen Rule in Chicago, 1890-1994.” Third, as the previous instances show, nonlegal rules do not disappear all at once, and although one might measure adherence to them at some arbitrary previous time, adherence at some later time, and measure the difference, this creates difficulties both in increased uncertainty and in limited applicability, because it almost forswears a measurement of normative change generally, focusing on a limited degree of change within a single norm. Legal rules are difficult enough, and as a special but important and accessible case of norms, techniques developed in the explanation of legal change could presumably be helpful to the more difficult tasks involved in characterizing and explaining change in norms more generally.


\(^{17}\)Frank B. Cross, Political Science and the New Legal Realism: A Case of Unfortunate Interdisciplinary Ignorance, 92 Nw. U.L. Rev. 251, 285 (1997) (suggesting this Court has an unusual concentration of “close” cases where small differences attributable to ideology might determine outcome). See also Michael J. Gerhardt, The Limited Path-Dependency of Precedent, 7 U.P.A.J. Const. L. 903, 955 (2005) (“The dynamics of the nation’s highest appellate court – the Supreme Court – are unlike those of any other court.”). This seems to be on the one hand inarguable, since its duties and docket are different. On the other hand, though, as institution it might well be that its dynamics in the cruder sense of the parameters of its norm-generation, such as rates of overruling, or its reactions to personnel changes, or its level of insulation from political pressure, could be more or less similar to other courts.
been overruled, and this complicates the basic data used in this project to measure legal
change. For these reasons, the method outlined in this Article has been prototyped
using a state supreme court, namely the Illinois Supreme Court (ISC), which began
operation in 1819, and has issued approximately 50,000 substantive opinions since that
time. The dynamics of the ISC, once explicated, are more likely to be comparable to the
other forty-nine state supreme courts, facilitating the long-term objective of extracting
common features (and variable determinants) of legal development. 18 Identifying these
factors will generally require a comparative study to eliminate any peculiar institutional
factors present in a single state. 19

Another feature of prior work on legal change, particularly when based on
analysis of court citations, is a focus on the influence (or lack thereof) exerted by the
legal doctrine of *stare decisis* on departure from precedent. 20 It may seem odd to have
not that already discussed this issue, given its prominence. After all, *stare decisis* is
supposed to be the internal norm governing the rate of change in norms. Therefore,
inquiry starting from a legal perspective might logically equate the two phenomena:
where *stare decisis* is present, change is absent. This is oversimplified even if one takes
the doctrine at face value, however. Precedential *stare decisis* does not purport to

---

18 This will be the subject of a future Article as the techniques outlined here are generalized and refined. A
limited amount of data does exist for a few states, see *supra* note 12, and is used comparatively, *infra*, in
Part III.
19 Cf. Oona Hathaway, *Path Dependence in the Law, the Course and Pattern of Legal Change in a Common-Law
System*, 86 IOWA L. REV. 601, 655 (2001) (proposing that different rates of legal change are optimal for
different areas of law).
20 Michael J. Gerhardt, *The Role of Precedent in Constitutional Decisionmaking and Theory*, 60 GEO WASH. L.,
States Supreme Court Justices*, 40 AM. J. POLI. SCI. 971 (1996) SAUL J. BRENNER & HAROLD J. SPAETH, STARE
prevent change; precedents are rather supposed to act as the “stabilizers and brakes, rather than [the] engines and accelerators”\textsuperscript{21} within the machinery of norm production.

As an analytical problem, however, this concept is hard to detect at the outset of any inquiry. Presumably, the doctrine hypothesizes the influence of \textit{stare decisis} will be detectable by observing a slower rate of legal change than would otherwise be the case, if the doctrine were absent or ignored. Statistically speaking this would mean discovering a pattern in the residuals of one’s model of legal change – “something” mysteriously slowing down the rate of change, but this presumes a fairly complete quantitative model of legal change, which can only be achieved at the end of inquiry, not its outset. A slightly more promising method of inquiry would base an assessment of \textit{stare decisis} on an independent measurement of various courts’ relative levels of adherence to this doctrine. If rates of change are indeed inversely correlated with the level of strength accorded by the court to the principle of \textit{stare decisis}, this will provide at evidence at least consistent with the reality of the phenomenon, which has been characterized as essentially a rhetorical makeweight by a number of commentators.\textsuperscript{22}

The following study treats precedents and legal change, and \textit{stare decisis} doctrine thought to govern them, in a highly “realistic” way. By so proceeding, there is no intention of adopting every proposition of legal realism, either new or old. Nevertheless, given overruling as the measure of legal change, this


\textsuperscript{22} See, e.g., references collected supra, note 20. Accord, Frank Easterbrook, \textit{Ways of Criticizing the Court}, 95 HARV. L. REV. 802, 818 & n.39 (“Stare decisis is applied so loosely that it seems fair to say that it does not exist as a doctrine.”). Easterbrook nonetheless notes that as an institutional feature, a norm of precedent adherence is of considerable importance. Because of the controversy over the extent to which this phenomenon is “illusory,” it seems manifestly unwise to build any doctrinal assumptions about it into an empirical analysis.
necessarily assumes that the law is indeed changing when a court acts in this way, or as Justice O’Connor put it “when the Court changes its mind, the law changes with it.” As analytically useful as this view is for the current study, it has been derided by another learned Justice as alien to common-law jurisprudence, emanating instead “from the philosophy of Nietzsche.” The contrary view I am avoiding here is associated with Blackstone, who argued an overruled decision must be declared to have been “not law” rather than merely “bad law.” The practical differences between these two characterizations may not be completely clear, but it seems fair to admit the philosophical controversy, and acknowledge proceeding on the latter assumption rather than the former.

In Part II, I describe the methods used to retrieve and code the cases of the investigated jurisdiction, some relevant institutional characteristics about the history of Illinois Supreme Court, and the basic statistical characteristics of the database generated by these methods. Part III. describes the result of applying statistical methods, to validate and explain the patterns of legal change present in the sample, with particular emphasis on determining those factors that affect

24 Harper v. Va. Dept. of Taxation, 509 U.S.84, 107 (1993) (Scalia, J., concurring). Justice Scalia provides no reference as to what aspect of “the philosophy of Nietzsche” is animating the dissenting Justices in Harper, who do not themselves cite any German philosophers in their jurisprudential analyses. However, cf. Friedrich Nietzsche, Of Old and New Law Tables, Thus Spoke Zarathustra: A Book for Everyone and No One, 229-230 (1969) (“[Good people] hate the creator most: him who breaks the law tables and the old values ...they crucify him who writes new values on new law tables ...” ) (suggesting the reevaluation of all values in accord with a “joyful science,” by hypothesized normatively autonomous persons)
25 Harper v. Va. Dept. of Taxation, 509 U.S.84, 107 (1993) (Scalia, J., concurring) (emphasis in original) (quoting William Blackstone, I Commentaries on the Common Law of England 70 (1770)) There is a paradoxical nature to claims of only now discovering the “actual” law a preexisting decision failed to find, even if this is only an “as-if” heuristic for judges to hold as a mindset even as they are making rather than merely discerning law. See Arthur M. Jacobs, God Save This Postmodern Court: The Death of Necessity and the Transformation of the Supreme Court’s Overruling Rhetoric, 63 U. Cin. L. Rev. 1119, 1155 (1995).
relative hazard of a case being overruled at some future time. Period effects, in
which dynamic courts expose the then-extant body of precedent to increased
hazards, are shown to be present;\(^{26}\) in addition, the inclusion of a dissent in an
opinion is highly correlated as a product defect that increases the likelihood of eventual failure. Similarly, I illustrate the incorporation of type-specific hazards by showing how inclusion of a criminal law rule in an opinion increases its failure rate. This Part also compares the principal results with the limited evidence currently available for other state court systems, and finds broad consistency for the hazards to precedent.

In Part IV, having shown the institutional rate of change to vary significantly over time, and non-randomly, I examine if any light can be shown on the efficacy of *stare decisis*, conceived of institutionally as a “meta–norm” that governs the rate of change. Specifically, the question becomes whether variations in the rate of change can be attributed in part to variations in doctrine. Because of the difficulties of gaining an independent measure of *stare decisis*, the results cannot be conclusive, but a more qualitative assessment of overruling case law indeed shows at least a correlation between doctrinal shifts toward a “looser” version of *stare decisis* and the increase in the propensity to overrule. Whether the

---

\(^{26}\) Courts overturning many precedents are sometimes considered as “activist,” see, e.g., Renz, *supra* note 5; the Article will employ the term “dynamic” instead, since it seems less normatively loaded. Moreover, an “activist” court carries with it the usual meaning of a court engaged in asserting itself vis-à-vis other normative institutions such as the legislature. By contrast, we are primarily concerned here with the assertiveness displayed by a court with regard to *its own* past actions. There is a manner in which these are related, as discussed infra in Part IV, because courts can vary in how they allocate responsibility between the legislative and judicial branches for the correction of dubious judicial decisions. Nevertheless, it would be inaccurate to assume a court active in one way is sufficiently active to be called an “activist” court – if this description can indeed even be given a technical rather than merely rhetorical interpretation.
new legal rule (about legal rules) is merely a post-hoc rationalization is one among a number of questions highlighted for further research.

II. METHODS AND DATA

The method employed by this study consists of two basic steps, an automated form of data collection and an analysis of this data using, inter alia, a variety of techniques more commonly applied in demography or engineering, in order to estimate “lifespan” or “time to failure” of court precedents. Taking one of the commercial legal databases (Westlaw), all cases coded as “bad law” within a particular jurisdiction were collected. Using a system of relatively straightforward programming applied to the cases so identified, complementary tables can be generated of all “terminated” cases together with the later decisions that caused them to go bad – the “terminating” cases.

Some cases “fail” because of reversals by the SCOTUS, others are withdrawn by the issuing ISC, or are superseded by subsequent legislation. Although the risks of these events may well be of importance, the focus here is on overruling, the main source of failure and the one tied to considerations of legal change.

A. Data Collection

The specific method of counting departures from precedent is to use the Westlaw database to identify all opinions issued by the Court which have subsequently been

---

27 Cases were collected by this method on 9/1/05, prior to the start of the Illinois Supreme Court’s 2005-2006 term. These are the “red flagged” cases so familiar to disappointed attorneys. Essentially, these cases can then be checked by Westcheck procedure to identify and extract the subsequent negative history that caused the red flag. To some extent this coding is self-fulfilling, since if routine cite-checking indicates a case to be bad, it is bad law, because it is manifestly unlikely it will be cited to a court.

28 The particular procedure for generating these cases is detailed in Appendix II, and the Word macros, as well as the data in Excel spreadsheet format, are available from the author.
overruled (or “disavowed,” “abrogated,” “decline to follow” and other terms – except for “distinguished”) as indicated within the negative history report generated by running the initially compiled dataset of “red-flagged” cases through the Westcheck cite-checking procedure.

This includes cases where the Court refused to follow a precedent without distinguishing it; in its extreme form this refusal essentially makes the precedent a dead letter, replacing any rule it announced with that given in the later case. Currently, the primary way to collect a list of these overruled and limited cases is the manual inspection of the relevant Shepard’s volumes and supplements. For instance, recent researchers found “it was necessary to review the Shepard’s volumes, page by page, to identify the overruling decisions. Therefore, we examined thousands of pages of Shepard’s Citations for each state supreme court’s decisions to identify all cases overruled after 1965.”29 This is an “extremely time-consuming [way] of collecting data….”30

Aside from its incredible tedium, it is likely this method introduces a significant probability of human error, in missing a letter code among the thousands of pages involved. My partially automated system for “universal Shepardization” begins by collecting a decade’s worth of opinions from the Court (2000-5000 cases in Illinois). This

29 Lindquist & Pybas, supra note 12, 20JUST. SYS.]. at 22. This is likely to create some aversion to further research along these lines as the researcher acquires a Pavlovian reaction to a volume of Shepard’s that involves watering of the eyes and general queasiness.
30 Lindquist & Pybas, supra note 12, 20JUST. SYS.]. at 20. See also Lanstra’s method: “Opinion data was collected by manually examining Shepard’s Citations paper copies of the Northwestern Reporter and the Northeastern Reporter. Each page of the supplements containing the years 1995-1999 were [sic] individually surveyed for cases that had been ‘overruled.’ The citations listed in the supplement for the overruled cases and the pinpoint citations for the overruling cases were then noted.” Lanstra, supra note 12, at 45.
list is quickly scanned and marked for red flagged cases\textsuperscript{31}, which are downloadable as separate text file.\textsuperscript{32} Those opinions with a citation in the Illinois Reports proceed through Westcheck, which generates a downloadable report.\textsuperscript{33}

Application of a somewhat more complex macro to this report places it in a tabular form, from which the principal overruling case,\textsuperscript{34} and the year of the decision, can be relatively easily matched with the overruled case, with a minimum of manual inspection and adjustment of the table (primarily removal of extraneous text not deleted by macro). Finally, the table is transferred to Excel and/or SPSS for further analysis. Once a list of each terminated case and its corresponding terminating case is entered on a standard spreadsheet, a master list of terminating cases can be generated by sorting the list and eliminating duplicates (since many overruling cases overrule several earlier cases, they will initially appear several times on a list generated by the method I have outlined). These “terminating” cases can then be dated and resorted by chronological order for analysis.

\textsuperscript{31} There is nothing definitive, of course, about the coding done in the Westlaw database, either in terms of the legal judgments involved or in the characterization of the relationship between earlier and later precedents. There are, in fact, three clear mistakes I myself have found. The research virtues of using West’s flags are first, that anything done with them is easily replicable, and second, that the coding has been done (by Thomson/West) entirely independently of the researcher and of any research hypothesis. The codes considered as overruling in this study, along with their frequencies within the set of 413 cases, are as follows: Overruled in Part (252), Disapproved of (75), Overruled (63), Disagreed With (52), Declined to Follow (47), Abrogated (26), Overruling Recognized (12), Implied Overruling Recognized (5), Abrogation Recognized (4), Abandoned (4) Receded From (4), Refused to Follow (1), Disavowed (1).

\textsuperscript{32} Both Westlaw and Lexis-Nexis have been informed of this problem and of the minor Javascript adjustments necessary to allow automated searching for “red-flagged” cases. This would solve the most tedious step in the process, sorting through approximately 50,000 citations.

\textsuperscript{33} Westcheck is necessarily calibrated to generate only the “negative history” of the citation.

\textsuperscript{34} I include in the data set the Illinois Supreme Court case ranked highest in the WestCheck output. For example, if one case overrules another, that enters the data set; but if a later or earlier case “recognizes the overruling” it is not included. If the Illinois Supreme Court has not ruled on a case (only an appellate court or the court of another state), it is not included, no matter how much those courts dislike the precedent.
Illinois, and in particular, the output of its Supreme Court, has served as the basis for developing this system. Obviously, it is designed for general applicability, but by its nature requires examination of the *entire* legal history of a court (in order to collect all overruled cases). This corrects an important flaw in some previous studies of the court process. It is possible the Illinois Supreme Court will overturn a precedent from the 1820s tomorrow. Unless the entire population of precedents is examined, the fact that such a precedent has gone bad will not be apparent, and consequently, it will be impossible to trace an overruling case from it. If one starts from a content-based analysis of overruling cases, and traces back all overruled cases in rejected ruling a particular Period X, this will obviously fail to count cases that were overruled in a previous time Period X-1.

The consequence of this is that while the researcher may obtain an accurate count of the number of cases overruled between, say, 1970-2000, and of the number of overruling cases during that time, but there will not be an accurate count or distribution of the overruled cases. That is, most of the overruled cases counted will have originated in the decades of the study or just prior. I.e., if precedents from the 1950s were overruled before 1970, they will be invisible. Hence, if there is something intrinsic about precedents from the 1950s that gives them greater hardiness or vulnerability, such *period-of-issue effects* will be missed, unless all the time they are at hazard of overruling is considered.\(^{35}\) And to get a realistic sense if a period of issue effect is unusual, it is necessary to evaluate it relative to the hardiness of precedents from *all the other* periods

of issue, meaning in effect that the entire history and “population” of precedents ought to be studied.

Table 1. Illinois Database of All and Failed Cases

<table>
<thead>
<tr>
<th>Decade</th>
<th>Issued</th>
<th>Failed</th>
<th>Failure Rate</th>
<th>Overturned</th>
<th>Overrule Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000(^{36})</td>
<td>1178</td>
<td>20</td>
<td>1.6978%</td>
<td>3</td>
<td>0.25%</td>
</tr>
<tr>
<td>1990</td>
<td>1716</td>
<td>46</td>
<td>2.6807%</td>
<td>7</td>
<td>0.41%</td>
</tr>
<tr>
<td>1980</td>
<td>2201</td>
<td>59</td>
<td>2.6806%</td>
<td>14</td>
<td>0.64%</td>
</tr>
<tr>
<td>1970</td>
<td>2319</td>
<td>62</td>
<td>2.6736%</td>
<td>21</td>
<td>0.91%</td>
</tr>
<tr>
<td>1960</td>
<td>2590</td>
<td>57</td>
<td>2.2008%</td>
<td>23</td>
<td>0.89%</td>
</tr>
<tr>
<td>1950</td>
<td>2190</td>
<td>52</td>
<td>2.3744%</td>
<td>25</td>
<td>1.14%</td>
</tr>
<tr>
<td>1940</td>
<td>2485</td>
<td>63</td>
<td>2.5352%</td>
<td>44</td>
<td>1.77%</td>
</tr>
<tr>
<td>1930</td>
<td>2909</td>
<td>53</td>
<td>1.8219%</td>
<td>34</td>
<td>1.17%</td>
</tr>
<tr>
<td>1920</td>
<td>3959</td>
<td>40</td>
<td>1.0104%</td>
<td>34</td>
<td>0.86%</td>
</tr>
<tr>
<td>1910</td>
<td>4005</td>
<td>49</td>
<td>1.2235%</td>
<td>43</td>
<td>1.07%</td>
</tr>
<tr>
<td>1900</td>
<td>5020</td>
<td>48</td>
<td>0.9562%</td>
<td>46</td>
<td>0.92%</td>
</tr>
<tr>
<td>1890</td>
<td>4294</td>
<td>41</td>
<td>0.9548%</td>
<td>24</td>
<td>0.56%</td>
</tr>
<tr>
<td>1880</td>
<td>2986</td>
<td>43</td>
<td>1.4401%</td>
<td>24</td>
<td>0.80%</td>
</tr>
<tr>
<td>1870</td>
<td>5575</td>
<td>38</td>
<td>0.6816%</td>
<td>34</td>
<td>0.61%</td>
</tr>
<tr>
<td>1860</td>
<td>3152</td>
<td>18</td>
<td>0.5711%</td>
<td>17</td>
<td>0.54%</td>
</tr>
<tr>
<td>1850</td>
<td>1724</td>
<td>12</td>
<td>0.6961%</td>
<td>1</td>
<td>0.06%</td>
</tr>
<tr>
<td>1840</td>
<td>933</td>
<td>11</td>
<td>1.1790%</td>
<td>9</td>
<td>0.96%</td>
</tr>
<tr>
<td>1830</td>
<td>304</td>
<td>5</td>
<td>1.6447%</td>
<td>5</td>
<td>1.64%</td>
</tr>
<tr>
<td>1820(^{37})</td>
<td>141</td>
<td>4</td>
<td>2.8369%</td>
<td>5</td>
<td>3.55%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>49681</td>
<td>721</td>
<td>1.4513%</td>
<td>413</td>
<td>0.83%</td>
</tr>
</tbody>
</table>

As reflected in Table 1, at the current time, the court hears and opines on about 200 cases every year. The court’s caseload actually peaked at about 500/year between 1870 and 1880 (before intermediate appellate courts had been established), falling to 250/year in the next decade. This rose back up to 450/year in the early years of the twentieth century, principally because of the large mandatory jurisdiction of the court, until the Civil Practice Act of 1907 offered some relief, creating caseloads of about 350/year between 1910-1935, which the Civil Practice Act of 1933, by eliminating writs of error and other anomalies, seems to have cut down to about the present rate.

\(^{36}\) This decade includes only court activity up to mid 2005.

\(^{37}\) Five cases were decided in the 1819 term, and have been grouped the cases decided in the subsequent decade. None has been overruled.
Between 1819 and mid-September 2005, the Court had overruled or otherwise seen the effective demise of 721 of these previous cases. This was approximately one and a half percent of its total output of substantive cases (memorandum cases and other non-precedential rulings were omitted).

Of these 721 failures, 413 are coded as having been overruled (or words to that effect), and therefore as having failed for that reason. These 413 cases originate beginning in 1822, and ending in 2004. Their terminations have been effected by have been generated by a total of 284 “terminating” Court cases, a process of departure from its own precedent that began in 1832, and continues up through 2004.41 Because recent cases have had little time to be rejected, most recent failure are due to reversal or other phenomena.

Comparing these two series of cases, terminated and terminating, it is possible to track the level of legal volatility, which equates to relative adherence to precedent. In addition, because this method generates the dates of the precedents involved, the time-to-failure or lifespan of the terminated precedent is given, and I employ methods from survival or hazards analysis to examine the relative risks faced by a case as it ages and encounters later courts.42 The statistical measures introduced here, although not terribly
complex, are novel as applied to this sort of data or question, and are proposed largely for refinement and comparative use by others. Nevertheless, they propose a logical and testable formalization for the various “risks,” such as the presence of dissent, or the type of case, which might elevate the chance of an opinion being found to be wrong. In this way, the method may yield analytically useful insights and testable hypotheses regarding the broad patterns and historical chances in the lifespan of precedent, a phrase which this study attempts to push toward a more rigorous usage.

Operationally, I estimate this hazard by the rate at which a court explicitly departs from its prior norms (including those cases it “recognizes” it has done so sub rosa for some time). This approach ignores two obvious problems. First, most cases, even those produced by a supreme court, simply disappear into the mass of legal literature. It is only a small subset of all 50,000 cases that are relied upon, and thus placed at risk of being overturned in an opinion. This inert body of law is largely irrelevant to the question of volatility, but the weight that should be accorded it as representative of an overarching “stability” is difficult to assess. For instance, if a court produces a thousand opinions in Year X and 10 are overturned, should we necessarily say the law produced in X is “more stable” than the product of Year Y, when 200 opinions were produced and 5 were overturned? How much more stable? In this way it might be thought that for periods with an extensive docket of uncontroversial cases and

---

44 This problem of course is now familiar to most legal researchers, as there may well be other “dead letter” cases parallel to (or relying on) an overruled case, but which has not been marked by the legal database as having become “bad law.”
short adjudicatory opinions, the percentages reported in Table 1 tend to underestimate the amount of relative legal change.

Second, the rate of overruling and legal change can easily become uncoupled by the habit of courts and practitioners to “distinguish” precedents, or to simply ignore them, and thus in fact deviate from a previous norm without stating they are doing so, thereby causing an absolute underestimate in legal change to the extent a court is not transparent. Indeed, numerous cases claim to be only “reporting” that a precedent has already been overruled by intervening cases, although those intervening cases made no such statement when actually issued. As a matter of public policy, some might argue this is a sort of “noble lie” that covers over the wayward nature of legal decision-making, but it nonetheless ought to be counted as instability, if for no other reason than it frequently serves as the precursor to a precedent either becoming a dead letter, or, should it continue to be used, exposes it to a higher risk of being overturned. There is no easy way around these problems, which are inherent in the unwillingness of some courts to be open in how and when they establish and repudiate governing norms.

Considered as a group, the 413 overruled decisions had a mean time to failure of 29.02 years (s.e. 1.30) and a median time to failure of 22 years (s.e. 1.69). That is, 50% of the overruled cases were 22 years in age when they were terminated. This is younger than the average overruled precedent of the recent SCOTUS, where time to failure was

45 See supra note 31, indicating this is 21 of 413 or about 5% of the cases in the subpopulation. Because of my method of coding, such cases indeed result in a count of an overruling and overruled case or cases; however it is the “recognizing” case, if it is the first one reported by the citation service, which gives the date of overruling and thus the time-to-failure.
measured as 36.2 years, but with a quite similar median time of 23.2. The difference between the mean and median figures indicates, as one might expect, that the higher average age in both courts is driven by the presence of a small number of hundred year old precedents. Separated into 10 year intervals, measuring the time between the overruled and overruling decision, the implication of Table 2 is that the most hazardous period for a precedent is in the period shortly after it is produced.

### Table 2 Time to Failure for Overruled Cases in Illinois

<table>
<thead>
<tr>
<th>Age of Case At Time Overturned</th>
<th>Number of Overruled Cases</th>
<th>Percentage of Overruled Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 or fewer years old</td>
<td>131</td>
<td>31.72%</td>
</tr>
<tr>
<td>11-20 years old</td>
<td>70</td>
<td>16.95%</td>
</tr>
<tr>
<td>21-30 years old</td>
<td>50</td>
<td>12.11%</td>
</tr>
<tr>
<td>31-40 years old</td>
<td>47</td>
<td>11.38%</td>
</tr>
<tr>
<td>41-50 years old</td>
<td>39</td>
<td>9.44%</td>
</tr>
<tr>
<td>51-60 years old</td>
<td>18</td>
<td>4.36%</td>
</tr>
<tr>
<td>61-70 years old</td>
<td>18</td>
<td>4.36%</td>
</tr>
<tr>
<td>71-80 years old</td>
<td>16</td>
<td>3.87%</td>
</tr>
<tr>
<td>81-90 years old</td>
<td>12</td>
<td>2.91%</td>
</tr>
<tr>
<td>91-100 years</td>
<td>5</td>
<td>1.21%</td>
</tr>
<tr>
<td>Greater than 100 years old</td>
<td>7</td>
<td>1.69%</td>
</tr>
</tbody>
</table>

An initial caveat to this statement would be to note during the early years of the court’s operation, the only precedents it could overturn were recent ones, because these were the only available. Because there are in fact rather few of these, as will be discussed infra, this is likely to have a relatively small effect, although in all cases it tends to shift the actual hazard of overruling toward more recent years, because, for

---

46 Amy L. Padden, Overruling Decisions in the Supreme Court: The Role of Decision’s Vote, Age, and Subject Matter in the Application of Stare Decisis after Payne v. Tennessee, 82 GEO. L. J. 1689, 1718 (1994). Padden’s sample covered only the period between the 1970 term and the early 90’s, counting 84 overrulings in all. The U.S. Supreme Court appears to differ in that it reaches further back in the past, perhaps simply because it has a longer history (although it has only a slightly longer history as an institution, the SCOTUS in the last few decades has a much longer history than does the average Illinois Supreme Court sampled throughout its existence).
instance “100 year old precedents” have only been “at hazard” since the 1920’s in Illinois. In addition, as Table 1 notes, the court has varied substantially (although not in the last several decades) in the volume of its opinion production.

More importantly, if the hazard of failure is assumed to be a constant rate per precedent issued, then the exaggerated representation of opinions in such periods might affect average age; for instance in the period immediately after such a productive time, the average age would be lower, while as the decades pass from this period, the average age (based on the overrepresentation of precedents “of a certain age” among the stock of legal capital) would rise. Inspection of Table 1, if attention is paid to overturned cases rather than failures generally, a constant rate per precedent converging on about 1% is plausible for at least the twentieth century, if precedents dating from the 1940 (about which more infra) are excepted. The relatively young part of legal capital from recent decades has a lower rate; but that is because it has not yet been fully exposed to all the hazard of being overturned; some precedents from these decades will be overturned in the future, raising the percentage of precedent that fails in this way to something likely approximating 1%.

A graph of cumulative mortality shows a relatively smoothly decelerating curve, moving asymptotically toward 1.0 (when all precedents that will in fact eventually be overruled have been). 47 Again, this is to be treated with caution. As a court’s history extends, the tail of such a graph as Figure 1 will gradually lengthen out; however, the

47 This graph was generated by SPSS on 413 overruled decisions, with all cases considered as undergoing the “event” termination. Of course, the very premise of this Article is that contained within the current body of “good” law are decisions that in the fullness of time will fail; we simply do not yet know which ones they are, although the current project is designed to generate quantitative predictors about them. One implication of Figure 1 is that the further back in time one looks in the Illinois Reports, working back from the present, the less likely one is to find law that will eventually be overturned.
lion’s share of the overturning will continue to be in the early years of a precedent’s subsequent history. A statistical consequence of this time dependence is that we would expect the median age of an overruled precedent to be more stable (and any variations in it more immediately informative) than the mean, which will normally be expected to increase as a court goes forward, and the average age of its standing body of precedent increases.

Figure 1  Time To Failure for Overturned Precedents

![Graph showing time to failure for overturned precedents]

Padden’s conclusion from the U.S. Supreme Court that “recent cases are not more subject to reversal as an empirical matter”\(^{48}\) needs to be examined more rigorously, even as that court, and certainly does not seem to apply to the population of precedents from Illinois. Such a statement can mean at least two different things. Apparently, Padden’s meaning is that, if one defines “recent” in some way, that category contains fewer cases than the category “not recent.” This is not, however, what

\(^{48}\) See supra note 46 at 1719.
being “subject to reversal” means intuitively. Taken more precisely, this ought to be a measure of the risk of overruling – perhaps equated in judicial behavior by a looser norm of stare decisis as to that precedent, or simply by more frequent use and potential for review. Simply as a population, unless a court is in its early years, there are far fewer “recent” precedents than there are older ones, and these have been subjected to many more opportunities for a potential overruling. Although I have not recalculated all of her numbers, Padden states that “only”11/84 overruled cases were less than 4 years old. But since this is 13% of the sample out of the approximately 200 years of precedents, of which 4 years is only 2%, it really implies that indeed the per/year hazard is greater for recent rather than early cases. Avoiding problems of this type, as to whether or not the age of precedents being overruled is “unusual,” is a principal rationale for the use of the type of models presented here.

How are we to interpret Figure 1 consistent with the entire population of precedents? Roughly speaking, 1% of precedents will be overturned; a somewhat higher percentage will fail in some other way, and in recent years, the percentage of precedents that will be overturned may have risen to approximately 2%. But let us assume 1% for sake of illustration. This is 1% eventually – the line traced in Figure 1 approaches this number as an asymptote, as time stretches out indefinitely. We can therefore interpret the fate of an individual precedent (knowing nothing else about it) in the following way – after approximately 20 years there is one-half percent hazard of the precedent being overturned, and a declining per-year hazard after that point which will converge on a sum of an additional half-percent of overturning in the indefinite future.
Around this interpretation of the overall pattern of precedent in a jurisdiction we can proceed to add predictors that change either the ultimate asymptotic hazard of overturning a precedent with particular characteristics, or the time pattern of that hazard.

B. **Historical Trends in the Illinois Supreme Court**

Some of the most immediately apparent changes in the treatment of precedent within the test dataset are related to the time period in which precedents are issued and terminated. The premise entertained here is that it is possible to get a sense of the practical viability of adherence to precedence, in a relative sense, simply by estimating legal volatility, through tracking the frequency a particular court explicitly disregards its own precedent. As noted, there are 413 terminated decisions and 284 terminating decisions. As the chart below, Figure 2, demonstrates, these departures from precedent are far from evenly distributed. Ignoring the early years of the nineteenth century, where relatively small caseloads can account for the low case numbers in both categories, and the most recent period,\(^{49}\) where there has been insufficient time for many decisions of the period to be subsequently overturned, visual inspection suggests at least two changes in the rate of legal volatility.

Beginning around 1910 and continuing until 1950, there was very little challenge by the Court to its precedent, this trough in activity being possibly due, for instance, to a strong adherence to the norm of *stare decisis*, although such explanation would be

---

\(^{49}\) The period 2000 only covers the period up through the middle of 2005 or a total of approximately 5.5 years, although in fact no opinions issued in 2005 up to the period of sampling in September 2005 had been overturned or had overturned other decisions. The other periods cover 5 years worth of opinions. Therefore the final point is comparable.
preliminary. Beginning in the 1950s, the Court began not only to overrule itself more often than it had in the past forty years, but indeed at far greater frequency than it had ever done. This continued through the early part of the next decade, but perhaps surprisingly, has declined subsequently, although it has remained significantly above the numbers produced prior to 1950, years where caseloads were often considerably higher and thus “opportunities” for overruling might be thought to have been considerably greater. Remarkably enough, these 15 years issued 76 terminating cases; by comparison, the court had issued only 104 such decisions in its previous 130 year history, and following this spike, there seems to have been a permanent elevation in the number of terminating cases.

Figure 2  Changes in Legal Volatility for Overturned Precedents

Assuming for the moment that this spike is statistically valid (as I discuss below, it certainly is), there are two basic categories of explanation one could provide about changes in departures from precedent. Either there has been a change in the nature of the precedent with which the court is confronted, or there has been a change in the court (or
both). These alternatives can be expressed in more formal terms, using the analogy of engineering failure or demographic mortality. The increased rate of failure must be due to either: (1) an intrinsic vulnerability of the entity experiencing the hazard, so that some members of the class are more likely to fail (i.e., a bad batch of GM automobiles) and these are overrepresented during the time period (i.e., the 1970’s); (2) alternatively, the entity at risk of failure may be exposed to a more dangerous extrinsic environment during this period and therefore fail at a greater rate, despite having features that make it no more or less vulnerable than comparable entities entering service at earlier or later periods (e.g., transatlantic freighters before, during, and after World War II).

Not only does the distinction between extrinsic and intrinsic hazards matter for the types of models applied to explain legal change, it also leads to a certain amount of practical insight as to the origins of legal volatility. It is to be expected that a court will have a base rate of overrulings to correct errors previously made. If the court in the a certain periods was particularly prone to making errors, meaning more vulnerable precedents, then the number of corrected errors would be expected to increase, leading to a “spike” in overruling in the subsequent period, without any change in the stare decisis standards applied to precedents. Alternatively, one might suppose precedents have not changed in aggregate “quality,” but the standards of stare decisis applied have been loosened” which is one way of increasing the danger of a legal environment and creating a “spike” in overruling.

There are some different methods by which the likelihood of these two hypotheses can be assessed. First, return for a moment to the Figure 2 on legal history.
Ignoring the early history of the Court, where there were few cases, and also its most recent years, for which there has been insufficient time to overturn many cases, the number of “failed cases” accumulated between 1870 and 1989 is relatively flat, especially when compared to the distribution of cases that overturned them. This is inherently reasonable, but if the error rate is constant (measured as errors per year rather than errors per opinion), it would also be reasonable to expect that overturning cases should also be flat.

A constant error rate yields number of errors, \( e \) at time \( t \), \( e_t \). If the error correction rate, \( c \), in subsequent periods is also constant, \( c_{t+1} \), we would predict that the distribution of departures of precedent, \( O_t \) would approximate the error correction rate multiplied by the errors, or \( O_t \approx c_t (e_{t-1} + e_{t-2} + \ldots) \). This assumes error correction is applied to all old cases presented to the Court during time \( t \), with the number of errors available for correction from the earlier period at the earlier times being adjusted downward for those already caught in \( O_{t-1} \), so as to keep \( O_t \) approximately constant. Such a hypothetical process would be broadly consistent with the pattern in Figure 1—the more obvious errors (the “low hanging fruit”) are caught at a relatively young age, whereas increasingly more obscure errors from some particular era are caught with decreasing frequency. As far as overruling goes, this reflects error correction applied to all legal capital, and the number of “uncaught errors” in this stock should stabilize as some new errors are put in by issuance of new opinions, while approximately the same number are taken out by overruling (and again excepting the very early period where
there was little precedent to review). In order to get the volatility reflected in Figure 2, therefore, either c or e must not be constant.

We can disentangle this to some extent, despite our inability to observe the error-correction rate, e. Hypotheses of flatness can be tested by a likelihood estimator, G (approximating a chi-square) that measures whether the observed distribution of ei or Oi is significantly different from an even distribution.50 For overruled cases, ei, this estimate of an even distribution cannot be rejected ($G = 13.16 < 19.68$, the $\chi^2$ for .05 at 11d.f.). An alternative way to confirm this is to use regression statistics (against time) to estimate the appropriate model for the distribution. For terminated cases, this produces a non-significant regression in which the linear coefficient is positive (.43) but with a standard error of .53, and without any statistical significance (a constant of about 30 cases per decade is very significant). This means a flat line cannot be rejected as the appropriate model.

This analysis appears to demonstrate prima facie that the error rate is indeed constant throughout the Court’s history, an interesting result in itself.51 It is interesting for students of stare decisis because it argues that the problem with precedents (at least for this institution) is not incompetence of some particular era; all courts get about the same number of things “wrong” every decade. If this is so, it would not mean of course we would expect the actual number of cases lost to be identical – there would a certain

51 Of course, there is a deep philosophical question contained in the idea that we may state that a case is erroneous when decided, although courts frequently in retrospect make just such statements. For the purposes here, I mean “simply” the realist view that error is that rate of issuing cases that later incarnations of the same court will find infelicitous. It might well be that either through a failure of quality and/or the dominance of a historically unusual jurisprudence (if those could be distinguished) that the “error” rate would not be the same—but that is not evidenced in this sample.
amount of random variation. It does imply, however, that (again trimming out the ends of the time period) the number of overruled cases would be approximately equal and that the variance would be normally distributed. To test whether overruled cases are normally distributed, I grouped terminated cases in decades from 1870 - 1989, and used the Kolgomorov-Smirnov test on these 12 measures. This yielded a statistic of .147, which is non-significant from the null hypothesis of normality; the distribution of terminated cases is approximately normal, as expected from the previous statistics.

By contrast, as the visual contrast suggests, an even distribution cannot be sustained as to overruling cases. The G statistic for the same twelve decades is 109.36 > 31.26 the $\chi^2$ for .001 (at 11d.f), so the “flat” model is not appropriate. A linear model with coefficient of 2.9 (s.e. .9) is significant at the .01 level. Although this does not tell us precisely what the right model is for $O_t$ in relation to time (it does not appear to be linear for instance), it tells us what would not be right – a flat line. Because $e_t$ is constant, the only source in a change in $O_t$ must be a change in the “error correction” rate, $c$. This is not constant as we go from 1870 to 1990; error correction rates definitely increase, although the rate of errors does not (in a significant fashion). On the same point, Kolgomorov-Smirnov shows the distribution of overrulings by time period to be not at all normal (.285 statistic, for p=.008); it is indeed heavily skewed.

The non-normality is driven by a different time pattern of hazard which emerges if one looks specifically at the period of the “spike” between 1950 and 1965, which appears in Figure 2. The pattern from this period is traced by the bold line in Figure 3, and contrasts with the age of precedents overruled in all other periods. This line is not
the smoothly declining curve of Figure 1, but much closer to linear, meaning all the precedents of the past, regardless of their age, were at approximately the same hazard of being overturned by the court during the period 1950-1965.

*Figure 3  Patterns of Hazard of Precedent Termination*

Comparing the means and medians (the latter one can easily do visually in Figure 3): in other periods of court activity, the mean age is 26.89 (se.1.6) and the median is 18 (s.e. 1.82), but in 1950-1965, the mean age was 34.29 (s.e. 2.09) and the median 32 (s.e. 2.34). In other words, there is in this period no deceleration of the hazard as there is in the rest of history. This is how, actually and mathematically, a constant error rate is consistent with an uneven error-correction rate. The periods of high error-correction reach back further in the past to eliminate accumulated “uncaught errors” from the previous half century. Not surprisingly the difference in these time-to-
failure or “survival” distributions is highly significant in the statistical (Breslow test $=15.02, p<.0001$) as well as the more conventional sense.

III. MODELING THE FATE OF PRECEDENT

The appropriate way ultimately to model adherence to precedent is to identify the factors that raise or lower the hazard any particular case will be overturned by a later court. This is approached by a variety of regression models (usually known as Cox regressions) well-known in epidemiology and increasingly employed in social science generally. These models provide a quantitative interpretation of the hazard experienced through time, or conversely, the survival through these hazards. In the biological analogy, precedents are born when the opinion is issued and last for a certain period, “dying” when they are rejected and are no longer normatively authoritative. Engineers use essentially the same method to examine the time to failure of a component or product. Variation in the rate of legal change is therefore reconceived as a general increase or decrease in the hazard experienced by the existing stock of legal capital, during a certain period of time.

As suggested in the Introduction, the use of such models is complicated because Illinois Supreme Court cases are distinct in certain ways from, say, migrating salmon. Court cases are issued in the thousands, but die only in the dozens, yielding a continuously expanding population of potential norms to bedevil the public and

52 See generally, Raymond E. Wright, Survival Analysis, in, READING AND UNDERSTANDING MORE MULTIVARIATE STATISTICS, Ch. 11. (Laurence G. Grimm.& Paul R. Yarnold, eds.,2000); Holford, supra note 50, Ch. 8, Parametric Models for Hazard Functions.

53 A more complicated model, beyond the scope here, could extend this analogy by using non-overruling but negative cases as “health insults” that make the precedent “sick” and then estimate the conditional mortality from such cases that have “lost their vitality.”
practitioner. The “mortality” of such a population is very low, although the variation in it remains the relevant variable here as the measure of legal volatility. Moreover, most cases reach another end by fading away rather than burning out, and although this disappearance could also be measured, it would lead us away from the principle of adherence to precedent to the separate question of the choice of precedent.

One obvious source or indicator of a flawed opinion is its accompaniment by a dissenting opinion. This can be likened to a product flaw, or if one prefers, a warning label on the majority opinion, indicating it has failed the quality test of at least one inspector – the dissenting judge or judges. With this hypothesis in mind, I collected all dissents from the database, 2755 of them from 1819 into 2005.54 These dissents were downloaded and separated into records, and then compared with the records of “failed cases.”

One hundred and thirty one cases issued with dissent also were opinions listed as having been terminated. This produces an overall rate of failure of 4.75%: more than three times the failure rate of all opinions. If opinions issued without dissent are considered separately, there are 46926, of which 590 fail, resulting in a comparable failure rate of 1.26%. This is certainly a strong indicator that although dissents do not mark the majority of failing cases, they nevertheless are disproportionately represented,

54 This was done by adding to the jurisdictional search the limiting field DIS(dis!), which will pick up any opinion with a dissent containing a term “dis…”; that is, essentially all of them. The search was conducted 9/16/2005. Because of the nature of results returned, it appears that a certain number of dissents from an opinion – apparently where there are multiple separate dissents – can appear. For dissents in opinions that ultimately failed, these duplicates were removed; in this circumstance they were 10 out of 141. For non-failing opinions, there are presumably multiples, meaning that the estimate of the total number of “opinions with dissent” is a slight overestimate.
a result which is unsurprising, although it bears a certain value to measure the magnitude of the increased “odds.”

Table 3  
Dissenting and Failure Over Time

<table>
<thead>
<tr>
<th>Year</th>
<th>Dissents</th>
<th>Opinions</th>
<th>Dissent Failures</th>
<th>Failure Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>243</td>
<td>1178</td>
<td>6</td>
<td>2.47%</td>
</tr>
<tr>
<td>1990</td>
<td>419</td>
<td>1716</td>
<td>14</td>
<td>3.34%</td>
</tr>
<tr>
<td>1980</td>
<td>498</td>
<td>2201</td>
<td>31</td>
<td>6.22%</td>
</tr>
<tr>
<td>1970</td>
<td>354</td>
<td>2319</td>
<td>24</td>
<td>6.78%</td>
</tr>
<tr>
<td>1960</td>
<td>113</td>
<td>2590</td>
<td>11</td>
<td>9.73%</td>
</tr>
<tr>
<td>1950</td>
<td>108</td>
<td>2190</td>
<td>7</td>
<td>6.48%</td>
</tr>
<tr>
<td>1940</td>
<td>61</td>
<td>2485</td>
<td>3</td>
<td>4.92%</td>
</tr>
<tr>
<td>1930</td>
<td>142</td>
<td>2909</td>
<td>8</td>
<td>5.63%</td>
</tr>
<tr>
<td>1920</td>
<td>112</td>
<td>3959</td>
<td>6</td>
<td>5.36%</td>
</tr>
<tr>
<td>1910</td>
<td>172</td>
<td>4005</td>
<td>6</td>
<td>3.49%</td>
</tr>
<tr>
<td>1900</td>
<td>155</td>
<td>5020</td>
<td>5</td>
<td>3.23%</td>
</tr>
<tr>
<td>1890</td>
<td>81</td>
<td>4294</td>
<td>1</td>
<td>1.23%</td>
</tr>
<tr>
<td>1880</td>
<td>127</td>
<td>2986</td>
<td>6</td>
<td>4.72%</td>
</tr>
<tr>
<td>1870</td>
<td>98</td>
<td>5575</td>
<td>3</td>
<td>3.06%</td>
</tr>
<tr>
<td>1860</td>
<td>20</td>
<td>3152</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1850</td>
<td>20</td>
<td>1724</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1840</td>
<td>30</td>
<td>933</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1830</td>
<td>2</td>
<td>304</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>1820</td>
<td>0</td>
<td>141</td>
<td>0</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

An important feature of dissents in the current sample is that they show a change in the history of the ISC. This time pattern, however, does not correspond directly to the time pattern of overruling discussed above. Rather it increased rapidly in the period after 1970, and has continued to remain above its historical level in the ensuing decades. This is presented below as Figure 4. This is an interesting phenomenon, of course, although its causes are beyond the scope of the present study. My purpose here is to inquire how much dissent matters. That is, how much does it contribute to the level of legal instability? It is difficult to tie the spike in overruling occurring prior to 1965 to this change in dissenting behavior. Rather, as will be discussed below, there are independent effects of period. Plausibly nonetheless, the higher chronic rate of dissent
on modern courts results contributes to the higher background rate of change discussed earlier.

**Figure 4  Historical Pattern of Caseload and Dissents**

As a comparison, an even more substantial portion of the decisions from the United States Supreme Court contain dissents. In a quick survey using the same search methodology I applied to the state court, I identified a total of 5236 decisions in the SCOTUS database of 20564 total decisions.\textsuperscript{55} Here, too, dissent appears to be related to higher risk of failure, but the magnitude of effect (and thus its predictive value for failure) is weaker. In Banks’s temporally limited study of SCOTUS precedent, two-thirds of the overturned precedents contained dissents, whereas the background rate for all precedents is more like a one-quarter. However, considering relatively recent

\textsuperscript{55} These cases were retrieved using the Supreme Court database from Westlaw, broken down into periods because of retrieval restrictions, and excluding all “mem” (memorandum) cases. To retrieve dissents from among this group, I just added to the search the dissent (“DIS”) field, to see if contained a dissent, as in DIS(DISSEN!).

36
decisions only (during and not greatly prior to the period of the Banks study and thus presumably the ones under hazard), 3928/7002 or 56% started out with dissents. The effect of dissent on overturning is still in the predicted direction, since 66% overturned dissents is higher, but it is much less impressive.\textsuperscript{56} The influence of dissent standing alone is not therefore likely to be terribly impressive in the contemporary SCOTUS – it simply comes with the territory of decisions likely to establish an important principle of law and it is another reason why a focus on the SCOTUS is likely to be particularly misleading for analyzing the general dynamics of the common law.

In common law courts, the relationship between dissenting and failure appears direct and understandable, in that it either marks an opinion as weak or exposes it to attack. However, its relationship to legal change proper is less clear. Returning to the study population in Illinois, of the 131 opinions issued with a dissent that are ultimately terminated, most of them were eliminated by institutions other than the issuing court. By matching the records of these failures against the records of the 413 overruled cases only, we find an overlap of only 45 cases. It is still true that dissenting opinions are more common than random chance would expect among overruled cases. The 46926 opinions without dissent yield 368 overturned precedents, a rate of .7%; the 2755 opinions with dissent failed 45 times, a rate of 1.6%, or more than double. However, most failures related to dissent are due to reversals issued by the SCOTUS or (in criminal cases, grants of habeas corpus by other federal courts). Moreover, by far the

\textsuperscript{56}Christopher P. Banks, Reversals of Precedent and Judicial Policy-Making: How Judicial Conceptions of Stare Decisis in the U.S. Supreme Court Influence Social Change, 32 AKRON L. REV. 233, 241-242 & Tbl. 4. (1999). The actual ten years in which Banks inspected overruling produced 1220 opinions, 726 of which were issued with a dissenting opinion (or 60%), an even closer percentage.
majority of legal change (overturned precedents) occurs on cases that were not visibly “defective” upon issuance.

In order to measure the effect of dissent more precisely, it can be coded as a regression model. Given the previous indications of periods of instability, not explicable by changes in the frequency of dissent, it would seem necessary to create a model incorporating both the intrinsic weakness of dissenting and the possibility of extrinsic hazard created by periods of greater hazard. Modeling the latter is not straightforward because, as far as any precedent issued in year X goes, it will be reflected by the pattern of the hazard experienced, rather than the overall rate. I therefore separated out the sample into ten-year periods – based on when the opinion was issued, further separating these into opinions issued with dissent and without. Like dissent, the period of origin is an intrinsic hazard. (Hypothetically, an entire bad batch of opinions might be issued). This produced 28 entries, each of which was tied to a particular failure rate. I then input this data into a basic regression model, with all the different decades coded as one or zero for the rates associated with a particular decade. The size of each “cell” was used to weight the value of the data point. These period variables, as well as dissent, were the predictor variables of the failure rate. Naturally, this method sacrifices a considerable amount of information of the sort that would be available if the 50,000 entries of the entire population were all coded and the analyses run on them; even though most opinions are unanimous and unreversed, considerably more degrees of freedom would be available for estimation. This simple model has as its virtue only the
fact that it is understandable, and perhaps thereby more appropriate for an exploratory study.  

Essentially, two model equations were tested, with the outcome variable in both being H, the failure rate (not the overturning rate). The second equation (or rather set of equations) tested for possible interactions between the period variables and the dissent rate. The independent variables were D, a categorical dissent variable, a constant K, used to measure the base failure rate, and 14 categorical variables for each of the decade-long periods into which the population is sorted, P1 to P14.

\[
(1) \quad H = K + D + P1 + P2 \ldots + P14
\]

\[
(2) \quad H = K + D + P1 + P2 \ldots + P14 + (D \times P1) + (D \times P2) + (D \times P2) \ldots (D \times P14)
\]

Because the dependent variable varies between 0 and 1, it might be advisable to consider a logit regression model; no matter how high the predictor variables, it is simply impossible to push the dependent variable above 1 and it is likely that the relationship between hazard and predictors will decelerate as it asymptotes toward 1 – the logit controls for this. However when I performed this transformation, it did not improve the predictive value of the model; the reason for this is presumably that at the low levels of hazard considered here, the relationship can be approximated by a linear model, which, being simpler, is preferable.

Using only categorical coding of dissent and periods of issue, about 60% of the variance in the 28 different failure rates can be accounted for by a two variable model.

57 Technically, if the interest is really in whether a particular period has a greater hazard than other periods, it is usually modeled in a somewhat different way, in which an expected model of constant hazards is tested against the actual data. If model is rejected, then the period has a greater hazard. See Holford, supra n. 79, at 218.
The significant variables are whether we are dealing with the dissent group and whether the opinions were issued in the 1940s.

\[ H = .012 + .035 \text{(Dissents)} + .013 \text{(1940s)} \]

(3) That is, there is a background rate of about 1.2% (se. = .1%, p < .0001); for dissents, there is an increased risk of failure of 3.5% (s.e. = .5%; p < .0001). There also appears to be an elevated risk for the batch of opinions from the 1940 generally – and extra 1.3% hazard (s.e. = 5%; p = .027). The \( R^2 \) (adjusted) of the regression is 57.8%.\(^{58}\) If interactions between period and dissent are put in, a marginal improvement can be achieved because the cell of dissents from the 1960s appears to be also unusually prone to failure.

The resulting three variable model\(^{59}\) is then:

\[ H = .012 + .033 \text{(Dissents)} + .013 \text{(1940s)} + .052 \text{(Dissents in 1960s)} \]

(4) This improves the explanatory power of the model to 62.0% (\( R^2 \) adjusted). The constant and the effect of dissent remain highly significant and the period effects from the 1940s (s.e. .05; p = .02) and 1960s dissents (s.e. = .024 p = .037) seem to detect real elevated hazards of uncertain magnitude.

It would be useful to know whether these effects are truly due to their marking intrinsic weakness or whether they are simply correlated with extrinsic hazards (the presence of which we are prone to expect by the statistical spike in overruling circa 1950-1964). Dissents appears to be a genuine marker of structural weakness, because reference to Table 3 shows that there is a constantly increased effect, which, as

\(^{58}\) This procedure was performed on SPSS, using the forward stepwise method of entering variables. Other methods of variable selection were employed, achieving broadly similar results when the number of predictive variables is held to a low number (as is appropriate with only 28 data points).

\(^{59}\) Because of the way the dataset is constructed, the categorical variables, which except for dissent, apply only to one or two cells, are highly collinear, and it is possible to get marginally significant period effects. The ones described are consistently the strongest.
mentioned, is tied primarily to reversals rather than to overruling. To the extent a
dissenting judge realizes this additional hazard can be instantiated, dissents can serve a
strategic function.60

The period effects are trickier to assess. However, because they are more closely
tied to changes in overruling per se than are the effects of dissent, they may be even
more relevant to the assessment of legal change. If a period of issue shows elevated
hazard throughout its subsequent history, we can put the “blame” on the issuing
judges, perhaps. However, if the elevated risk attributable to the period arises from one
subsequent period, and this subsequent period also increases the risk for other
precedents, it is the latter “risky” period that is “at fault” rather than the earlier,
putatively defective issuing period.

This issue can be explored by observation of the survival pattern of precedents
from the different decades. For instance, if we examine the time to failure for
terminated precedents from different decades, an interesting pattern emerges. At the
simplest level, we can note that as to the 1940s, 2 precedents are overturned within the
decade, 22 precedents are overturned within the 1950-1964 span, and only 14 are

---

60 Cross is therefore incorrect to claim that dissents are inconsistent with the legal realist model. Political
Science and the New Legal Realism, supra note 17, at 305-306. In the current model, they clearly weaken the
future stability of the precedent. Although Cross seems to be arguing that no such weakening is
necessary in the pure realist model, because a court can get rid of whatever precedents get in its way, a
more complicated recursive model might recognize that courts and the public would put less faith in a
vulnerable precedent, thereby providing it less insulation on reliance grounds. Moreover, a dissent is an
invitation for litigants to attack a precedent, thereby increasing the number of occasions on which it is
exposed to a significant hazard of overruling by “opportunistic” judges, and presumably decreasing its
expected lifespan. Cf. Banks, supra note 56, 32 AKRON L. REV., at 241 (“The more dissension in a case
cannot help but signal to prospective litigants and courts that a disfavored precedent is on weak footing
and ripe for an aggressive challenge in court.”) Hence, it is plausible to suppose that dissents are
explicable on purely interest-based grounds since they probabilistically sabotage an unwanted legal
result; they may, of course, serve other purposes instead or as well – the point is that they should not be
considered an anomaly validating one view or other of the legal process.
overturned afterwards.\textsuperscript{61} Harking back to Figure 1, we would expect about half the total hazard to occur by the end of this period, and half later. However, a much larger proportion than predicted is attributable to the post-WWII period.

\textit{Figure 5} \hspace{1em} \textit{Cumulative Hazard from Two Decades}

The loss of precedent shown in Figure 5 above traces the cumulative hazard or mortality suffered by precedents issued in the 1900’s (solid line) and in the 1920’s (dashed line). The x-axis traces the age of the precedent. The hazard lines are in conjunction for the first twenty-five years, because the hazards experienced for the first twenty-five years after 1909 and the first twenty-five years after 1929 were relatively constant. (They were also constant in absolute terms, because these periods did not

\textsuperscript{61} Of 63 failed precedents emanating from this decade, 38 fail by overturning, a ratio consistent with the sample as a whole.
differ in the overall hazard rate). However, the 1920s line experiences a rapid increase in hazard at age 30, which flattens out to some extent at age 50. The 1900s line simply lags the later cohort because it reaches age 50 before coming into the hazardous period for it and this lasts until about age 70.

These periods, like several others, including the 1940s period, detected as statistically unusual by the regression model, experience the majority of their hazard during the relevant “spike period.” Because the precedents of the 1940s were most proximate to this period of greater activity, they experienced an elevated risk. That is, the period of dynamism raised the failure rate of the entire stock of legal capital prior to that time, but its proximity put relatively recent precedents at particular risk, because relatively recent precedents (even during this period) are at greater risk than older precedents of being overturned.

To display this more generally, we can take the median time to failure through the sample, and determine when precedents originating at different points in time will have experienced 50% of their total hazard, a crude estimate of when such precedents enter the accelerated part of their hazard curve. As is apparent from the graphical presentation in Figure 6 below, early precedents up to 1880, if they were to be overruled, did not survive all that long. The time to failure reaches a never to be equaled peak of about 70 years around 1890, and then gradually tapers off in an approximately linear fashion, with an approximately -1 slope, until it bottoms out at

---

62 This was calculated on a “rolling basis” by arranging the terminated precedents in chronological order, and taking, for every entry from 1860 to 1990, the median time to failure of the ten subsequent and ten prior precedents (for a rolling total of 21 from which to draw a median).
about 10 years circa 1950. It then rises back up again, until falling in the most recent years, a phenomenon attributable presumably to the fact that post-1980 precedents have not really experienced a substantial amount of their hazard, so that the current median of overruled precedents will rise as they continue to be overruled in the future. Or to put it simply, the right-side tail of the Figure 6 is an artifact. By contrast, the trough in the dynamic period, and the slope leading to that trough, are almost metrics of an important concentration of risk to precedent at the bottom of this trough.

*Figure 6 – Median Time to Failure, Rolling, 1860-1990*

![Graph showing variation in survival pattern](image)

Although we know from the above data that mere increases in caseload cannot explain the increase in risk occurring between 1950-1964, it might be hypothesized that other weaknesses in the immediately preceding legal capital made it more prone to error correction. One reason to doubt this is evident from the preceding figure;

---

63 Running a regression on the medians from 1881 to 1950 (249 observations) produced a linear regression explaining 66.8% of the variance (adjusted R²), with a slope of -0.66 (s.e. .02).
although the effects of the period of activism are somewhat more prevalent on the precedents of the preceding period, their effect reaches back much further in the past, and therefore if intrinsic rather than extrinsic explanations are proposed, they must be applied to several preceding periods. From the study of dissents, the form of the opinion does not appear to have become particularly vulnerable during this time. Another possibility would be that different substantive areas of the law are more prone to instability, and these areas of the law were more active prior to the period of greater activity. One such pattern is assessed in Figure 7 below.

Figure 7 – Time Pattern of Criminal Law Precedents and Precedent Instability

Figure 7 reflects a subpopulation of opinions I will call “criminal law rules,” collected using the methodology discussed in Part II in order to produce 6460 cases matching the relevant criteria. The rule for inclusion was that cases have the term
“criminal law” in its heading or “digest” information. It is indeed true that cases of this type are more vulnerable: 197 of these 6460 cases failed, 111 of them by overruling. This is triple the failure rate (3%) of the population as a whole (1%). However, the patterning of the court’s caseload and these rules does not indicate an overrepresentation of criminal law rules at risk is responsible for the period of instability. Although criminal law activity did rise in the Illinois courts during the 1920s and 30s, no surprise to devotees of gangster history, it fell back again in the subsequent decade, and rose again to an extreme level of activity during the period 1960-1969, when the rate of overrulings was actually falling. Recall that if intrinsic weakness were the problem we would expect these graphs to be out of phase in the opposite direction – a spike of criminal law preceding an instability spike.

The detection of periods of dynamism and the distinction of extrinsic and intrinsic hazards by means of citation analysis is the primary goal of the current Article. Although it would be suitable for some purposes to have remained content with merely noting the higher frequency of overruling, the more complex survival-analysis view of precedent demands a somewhat more critical perspective before concluding that intrinsic factors cannot account for such a period. Indeed, some unidentified factor might still do so, but I consider it rather unlikely. It is of interest that Priest, analyzing particular lines of cases in Illinois, noted a significant amount of what he labels as

---

64 The search for this on Westlaw is: CO(ILL.) & DI(“CRIMINAL LAW”). Essentially this means that a key number or headnote in criminal law is presented with the case. This does not produce all criminal cases because not all of them have coded for this; but it does tend to capture cases that might serve as future precedents for the criminal law propositions enunciated in the headnote, and consequently, identifies the cases likely to be at risk from any instability in the criminal law. (It is possible, alternatively, to search for terms such as People v. X, etc., according to the conventions of the time, and removing also-included public law cases).
instability-driven litigation during the general period identified as containing a greater extrinsic hazard.\textsuperscript{65} “The law appears to have been unsettled” in 1958 with regard to liability for workplace injury. Similarly, the primary destabilizing force in the other line of cases analyzed, having to do with the reallocation of risk between landlord and tenant for tenant injuries, occurred in 1965.\textsuperscript{66}

The limited data available for cross-state comparison is generally presented as overruling per number of cases filed in the years of the period of overruling. As I have discussed, I think this measure is rather misconceived as a metric of hazard, since it is not \textit{current} cases but \textit{past} ones that form the population at risk. However, for comparative purposes, the Illinois rate during the spike does stand out. These fifteen years produced 3341 total cases and 76 reversals, a rate per 1000 filings of 22.75. This is close to the level of turnover (23.5/1000) in the current Montana Supreme Court discussed (and decried) by Renz.\textsuperscript{67} Comparative rates from other small states during the 1990s, North Dakota (4.98), Delaware (1.29), Rhode Island (.46), Maine (.91), South Dakota (2.09), Nevada (2.8), Vermont (4.07), New Hampshire (.73), and Wyoming (2.63), all suggest a rate in the twenties as high.\textsuperscript{68} More directly comparable to Illinois (at least during the relevant period) are larger states with an intermediate appellate court. For

\textsuperscript{65} Priest, \textit{Measuring Legal Change}, supra note 1, at 211 (finding behavioral change related to \textit{Kennerly v. Shell Oil Co.}, 13 Ill.2d 431 (1958) as relates to workplace injury). Because Priest’s analysis begins in 1958, it would be unable to pick up period changes between c.1950 and earlier periods. Using his method, however, as a partial external check on the one used here, it does appear that the early 50s through mid 60s were more productive of instability than the period immediately after them.

\textsuperscript{66} Id. at 216 (analyzing the effect of \textit{Moldenhauer v. Krynski}, 62 Ill.App.2d 382 (1\textsuperscript{st} Dist., 1965).

\textsuperscript{67} Renz, \textit{Overrulings}, 65 MONT. L. REV., supra note 5, at 58. One caution is that rates on the Montana court \textit{should} be considerably lower than those in Illinois because it is a court of mandatory jurisdiction with a higher number of filings of “easy cases,” and all else equal, a lower rate of instability per filing. (This suggests Montana in the 90s was indeed more “active” than was the ISC as any time during its history). Previous decades on the Montana court had rates that varied from .7 to 13.1 per 1000 filings.

\textsuperscript{68} Id. at 58.
the thirty-two years up 1964 - 1996, that is, the period just after the period of interest, Lindquist & Pybas measure significantly lower rates for Alabama (6.6), Florida (6.8), Pennsylvania (7.4), and New Jersey (9.7).69 Interestingly, the recent rates in these states approximate Illinois’s “global” rate of overrulings per filings, (413/49681), or 8.31/1000 cases filed. But none of them is close to the rate during 1950-1965, suggesting by another line of evidence its unusual character.

The trouble with the analysis of extrinsic hazards is that they are, obviously, external to the body of legal capital they affect, and are far less susceptible to identification purely by case coding. A full institutional analysis is beyond the scope of this fundamentally methodological exercise. In Part IV however, I briefly consider some internal evidence supporting the notion that the legal norms regulating change may have altered during this period, or to be more precise, the threshold for what counts as an “error” in a case may have fallen, causing a period-specific elimination of “errors” accumulated in the previous decades. This produces an explanation of the patterns described above which has some parsimony and logic to it, but which remains hypothetical. I am satisfied with this depth of analysis, since the main purpose of the technique developed here is one of hypothesis generation, rather conclusive determination of cause.

IV. **Extrinsic Hazard and Stare Decisis**

An extrinsic hazard to precedent is a time-dependent predictor of failure independent of the features of the precedent at risk, or alternatively, interdependent

---

69 Lindquist & Pybas, *supra* note 5, at 23. The numbers used by these authors are per 100 filings and are multiplied through by 10 for comparability.
with some intrinsic weakness exposed to particularly elevated hazard in some environment, which in the present analysis means a particular court at a particular time. There are many forces external to the courts that affect their operation and willingness to alter their laws. Most obviously, since courts are made of men and women who are not – nor intended to be – interchangeable, replacing personnel on the courts will lead to different outcomes, including different outcomes on cases already presented, and entail legal change. In addition, it is plausible to assume general social upheaval will filter its effects into the courts (whether or not mediated by new personnel), as these institutions generally are either elected or appointed by elected officials, and can be expected in some limited way to respond to “demands” for “action” from the electorate, even if these demands are inconsistent with precedent. As pointed out above, there are clear limits to the amount of causality discoverable about extrinsic hazards from citation analysis, even of the aggressive sort advanced here.

One method, potentially more accessible to legal analysis, treats the institutional norm of *stare decisis* as a variable, whose greater or lesser strength inversely relates to the rate of legal change. Sometimes, quite wrongly, *stare decisis* is treated as equivalent to the rate of legal change. It is worth clarifying why this is an error: First, such elision ignores the possibility of a substandard body of precedent more prone to failure regardless of the standard by which it is judged – that is, it fails to take account of intrinsic hazard. Second, it further ignores the likelihood that, assuming *stare decisis* sets specific additional conditions for a case to be decided in a way opposite to the way a similar past case was decided, the rate at which such conditions may be satisfied can
vary through time (ex hypothesis), even if the doctrine governing path dependence, and fidelity to same, remain constant.

In terms of the present analysis, *stare decisis* is conceived as an institution-specific parameter restricting the extrinsic hazard of overruling past precedent. To wit, if there is a “natural” (path-independent) rate of errors in every group of precedents, then there will be a natural rate of overruling governed by the hazard function of past precedents; *stare decisis* suppresses this natural rate. The number of overrulings evidenced in any period, Period\(_i\), will approximate a sum of, for instance, .5% of the precedents issued in Period\(_i-1\), .25% of the precedents issued in Period\(_i-2\), and so forth, assuming that .5% and .25% reflect the hazards experienced by precedents over the length of Period\(_i\) as cases go from being one to two periods old, or from two to three periods old. A supreme court acts “naturally” by treating its past precedents the way it would treat the contemporary rulings of an intermediate appellate court whose actions it reviews for error. By essentially forgiving what would have been considered “errors” if the case were coming from a current intermediate appellate rather than a past supreme court, *stare decisis* acts to decrease the height of the hazard function, the asymptotic number of decisions from a past period that will be overruled, and the yearly rate at which they are overruled.

Thus, in the foregoing example, and keeping the matter as simple as possible, if *stare decisis* is defined as a scalar parameter C, and equivalently acts on each part of every relevant hazard function in the same way, Period\(_i\) will show overruling equal to the \((.005/C \times \text{opinions issued in Period}_{i-1}) + (.0025/K \times \text{opinions issued in Period}_{i-2})\), etc.; if the number of opinions per period is constant, N, this reduces to: \(O_i = \frac{N}{C} (.005 + .0025}\).
+ ...). Since “.0005” and the like are just sample values taken from the segment of the graph of cumulative hazard, this further reduces (making the heroic assumption that all hazard curves are the same for each period of issuance) to \( \sum H \). In the study population, the overall rate of overruling approximates to 1%, but if stare decisis is limiting this, the true “natural hazard” is more like \( C \times 1\% \). This true rate is invisible to us unless \( C=1 \), in which case the strength of stare decisis has fallen to nothing.

The foregoing contrasts to some extent with the definition of stare decisis used by Segal and Spaeth, who attempt to identify when the force of past decisions causes judges to decide opposite to the way they would (or rather, did) in a case of first impression.\(^70\) Their approach necessitates a focus on particular judges rather than the institution they are a part of, and moreover, requires the judge to have (1) dissented in a prior case, and then (2) to have concurred in a later, similar case upholding the proposition with which they previously disagreed, and (3) to have done so out of respect for precedent rather than a change in legal reasoning.\(^71\) However, individual judges may persist in their views because they believe that they are dissenting in the interest of stare decisis and they keep dissenting in that interest against a “deviant” line of cases for the same reason.\(^72\) Moreover, although dissents reveal something about

\(^70\) Jeffrey A. Segal & Harold J. Spaeth, The Influence of Stare Decisis on the Votes United States Supreme Court Justices, 40 AM. J. POLI. SCI., 871, 983 (1996).

\(^71\) Cf. “Stare decisis has no bite when it means merely that a court adheres to a precedent it considers correct. It is significant only when a court feels constrained to stick to a former ruling although the Court has come to regard it as unwise or unjust.” United States ex rel. Fong Foo v. Shaughnessy, 234 F.2d 715, 719 (2nd Cir. 1955) (refusing to apply stare decisis); Maki v. Freik, 40 Ill.2d 193, 196 (1968) (adhering to contributory negligence) (“a court should not depart from rules long recognized as the law merely because the court believes that it might decide the issue differently if the question were novel”).

\(^72\) See Howard Gillman, What’s Law Got to Do with It?: Judicial Behavioralists Test the “Legal Model” of Judicial Decision Making, 26 LAW & SOC. INQUIRY, 465, 483-84 (2001) (reviewing and offering an extended methodological critique of Spaeth & Segal (1999)’s failure to capture the phenomenon). To take a single example of the problem with this approach, consider one of the most recent examples of overruling in the
personal psychology, the stability values purportedly served by stare decisis are those of the law, contained in lead opinions, so whether or not dissenters persist in their dissent has no direct relevance to the question of legal volatility.\textsuperscript{73}

Although it is infrequently mentioned when overruling cases (or sustaining them), Illinois has what would appear to be a fairly clear qualitative test for when it will overturn cases it believes to be in error. We can hypothesize that a qualitative test requiring no more than a showing the prior case was “wrong” is one that equivalent to there being no stare decisis, no path dependence, a value of C approximating 1, and a “natural rate” of overruling. To the extent any greater showing than mere error is required, some “erroneous cases” will not qualify for overruling, and C > 1. The relative stringency of the tests – to the extent they either guide or reflect judicial behavior – ought to be measures of the relative level of C, which in turn translates into relatively lower levels of extrinsic hazard.

The Illinois Supreme Court has mentioned “stare decisis” in 201 different opinions. Of course, according to the working hypothesis of the average lawyer, shared here, the Court operates under some variant of the norm of stare decisis in all of the other opinions, perhaps indeed more so in those other opinions. However, only when

\textsuperscript{73} As discussed supra, it is reasonable to assume that dissents have an indirect relevance by making it more likely that the case to which they are attached is likely to be overruled. See also Gillman, What’s Law Got to Do With It?, supra note 72, at 482 & n. 19.
stare decisis is discussed would it ever be possible to perceive the differential operation of these variants directly, so these cases formed the basis for my initial inquiry.

Moreover, I did not attempt to trace alternative formulations where, e.g., the Court states that it must adhere to (or depart from) precedent, without mentioning the magic Latin phrase. This, together with a study of the relevant law in the appellate courts, would be appropriate in a full doctrinal history of the Illinois law of stare decisis, in which one attempts to tease out the “true” rule from the chaos of formulations, but that is not the purpose here. Instead, the question is whether legal change is essentially governed by written rules or not.

A reading of the case law would reveal what would appear to be a fairly workable test, reflecting requirements above the demonstration of mere error in a prior case. This is enunciated in, inter alia, Pasquale v. Speed Products Engineering in 1995:

“When a rule of law has once been settled, contravening no statute or constitutional principles, such rule ought to be followed under the doctrine of stare decisis unless it can be shown that serious detriment is thereby likely to arise prejudicial to public interest.”

Therefore, under Pasquale, before common-law weighing of precedent and equities is to begin, the proponent for an overruling must make a prior showing that the precedent attacked is inconsistent with a statute, with state or federal constitutional law, or alternatively, that as a practical matter the precedent has caused “serious detriment.” Such a test has nothing to do with “trends” or majority rules, new policy

---

74 166 Ill.2d 337, 349 (1995) (adhering to precedent).
75 An economic perspective would suggest that parties could show this “serious detriment” by means of the opportunity cost of the alternative norm they are urging. That is, they could satisfy the standard not merely by adducing instances of “harm” but by showing the lost benefits the state has suffered because it
sensitivities, or a reassessment of the relative strength of common-law arguments; these would only be relevant after the first inquiry; consequently only a subset of suboptimal or erroneous past decisions would be eligible to be revisited under this rule. As will be discussed, though, tests in general have never been consistently applied to this area in Illinois, much less this particular test. This does not mean there is no stare decisis as a phenomenon, or even as an internal norm governing the conduct of judges, only that – seemingly by choice – there is no articulated, enforced norm governing the rate of legal change.

Hypothesizing that variation in extrinsic hazard tracks variation in C, variation could not occur unless there was an internalized norm operating on decision-makers, with variants of this norm giving different answers as to the appropriate rate of legal change a court of last resort should engage in with regard to its own precedents. I doubt Illinois is exceptional in its regular genuflection toward the view that stare decisis is critical to the functioning of the legal system, even (or especially) when they have chosen to ignore it. As expressed – during a time exceptionally slow rate of change—

The stability of the rules of law by which the rights of citizens are determined is always the highest concern of courts of last resort. Rules of law once well established ought not to be lightly annulled and new foundations laid, which would result in a restless instability and unending

---

76This test, balancing harms in a manner similar to that where a preliminary injunction is involved, originates with Neff v. George, 364 Ill. 306, 309 (1936). See also Prall v. Burckhartt, 299 Ill. 19 (1921) (“Where the error of a previous decision is recognized, the question whether or not the rule of stare decisis shall be followed becomes a simple choice between relative evils. The rule should be adhered to unless it appears that the principle established must be productive of greater mischief to the community than can possibly ensue from not following previous decisions on the subject.”). The other main test – which was never clearly distinguished from the first and which Neff also mentions, was essentially temporal and accorded stare decisis effect to “decisions long acquiesced in.” Ibid.
uncertainty as to what the law is. If the maxim of stare decisis be disregarded and every case determined according to the way in which the court might be disposed to regard it if it were a matter of first impression, the result would be continued confusion and endless fluctuations.\textsuperscript{77}

Given this attitude, one might suppose it preferable that the norm preventing such confusion would itself be fully articulated, as well as consistent. Indeed the rule at work is especially opaque because of the written doctrine of \textit{stare decisis}, which bears only a loose relationship with the unwritten and governing doctrine. Under the logic of \textit{stare decisis} itself, regardless of the actual rate of change, this creates a new sort of “meta-instability,” an uncertainty about how stable the law really is, and pushes the confusion back one level. Finally, although overblown, it is notable how the Court speaks in the language of “stability” and “fluctuations.” If nothing else, this study has taken seriously the challenge of treating such terms in the appropriately formal fashion. Freed of doctrine, except as occasional indicator, it possible to treat \textit{stare decisis} in terms of the background hazard of precedential failure, a measurable rate to which general quantitative techniques can be applied.

The first variant of the rule of precedent adherence in Illinois was given by \textit{Bowers v. Green}, in 1832, which happens to be the first case (as generated by the automated) in which the Court overruled one of its precedents.\textsuperscript{78} \textit{Bowers} announced its

\textsuperscript{77} \textit{Ohnesorge v. Chicago City Ry. Co.}, 259 Ill. 424, 435 (1913). \textit{Ohnesorge} sends plaintiffs off with this further \textit{bon mot} which should do nothing to dispel the view of \textit{stare decisis} as a term of rhetoric: “As was well said by the Supreme Court of Virginia: ‘Without the observance of stare decisis the law is divested of one of its most important attributes, becomes fluctuating and capricious, and instead of being a steady light to guide, or shield to protect, becomes an \textit{ignis fatuus} to mislead, or a snare to entrap the citizen.’” (\textit{quoting Perkins v. Clements}, 1 Pat. \& H. 141 (Va. 1855)).

\textsuperscript{78} 2 Ill. 42 (overruling \textit{Clark v. Ross}, 1 Ill. 334 (1830)) (“The maxim, \textit{Stare decisis}, is one of great importance in the administration of justice, and ought not to be departed from for slight or trivial causes; yet this rule has never been carried so far as to preclude Courts from investigating former decisions, when the question has not undergone repeated examination, and become well settled. Wherever the construction
rule of *stare decisis*, treated this as a preliminary question to consideration of the merits, and applied it to the challenged precedent, which it found to be inconsistent with the relevant statute and likely to work grave injustice, and therefore overruled. Subsequent nineteenth century decisions present a “rule” of pure path dependence rather than a balancing of harms, specifying that *stare decisis* is created by repeated reliance by courts on a particular principle. In each overruling case, the decisions are targeted at the removal of what is characterized as an erroneous outlier precedent, not well-entrenched.\(^{79}\) In part these courts are relying on their historical primacy: relative lack of domestic precedent allows them to make use of a rule of *stare decisis* that will become increasingly strong over time, but which has not yet gained the power to bind, and stop correction of any particular errors they note.\(^{80}\)

The automated method identifies 413 overrulings or abrogations of earlier cases. Of these cases 30, or a little more than 5%, even mention *stare decisis*, and many of those do so only in dissent. The lead opinions are attached as Appendix 1. Interestingly, although the example set in 1832 was infrequently followed over the decades, several of the most recent terminating cases, beginning in 1998, have included doctrinal discussions. *Jones*, discussed *supra*, and *People v. Mitchell* (2000),\(^ {81}\) created *stare decisis* of a statute has been repeatedly given in the same way, or where a construction has been given and acquiesced in for a number of years, it would be manifestly improper for a court to disturb questions thus settled.”).

\(^{79}\) This type of language is typical of overruling decisions in 19\(^{th}\) century Illinois, which generally portrayed its actions as error-correcting in nature. Cf. Thomas R. Lee, *Stare Decisis in Historical Perspective: From the Founding Era to the Rehnquist Court*, 52 VAND. L. REV., 647, 682-687 (1999) (discussing error-correction norms in the nineteenth century U.S. Supreme Court). Whether it is a more or less stringent test than the “compelling reasons” or “good cause” standard currently used is not determinable from language alone.

\(^{80}\) See *Hathaway, supra* note 19, on the importance and relative freedom of courts in this position.

\(^{81}\) 189 Ill. 2d 312.
opinions in dissent, concurrence and lead. Other have mentioned this problem only in concurrence or dissent. Apart from this recent interest, lead discussions have tended to be scattered throughout the Illinois Reports – with the exception of a particularly active period around 1960, evident below in Figure 8.

Interestingly, opinions issued about this time (in the midst of the spike of overruling) seem to articulate a different model of stare decisis than the one that had been governing (in theory) the ISC up until that time, and it is arguably a less stringent standard than either this early rule, or a rule of the sort described by Pasquale. The fact that this standard coincides in time with judicial behavior consistent with increased extrinsic hazard is in accord with the working hypothesis, but it should be noted the rule is announced after much of the behavior putatively consistent with the rule has

---

82 People v. Boclair, 202 Ill. 2d 89, 116 (Ill., 2002) (Freeman, J. concurring); People v. Tisdel, 201 Ill. 2d 210, 227 (Ill., 2002) (McMorrow, J., dissenting); McMahan v. Industrial Comm’n, 183 Ill. 2d 499, 518 (1998) (Heiple, J. concurring).
already occurred, giving it the flavor of a “post-facto rationalizations of results.”

Charitably, it could be thought of as a more-or-less accurate reflection of the implicit meta-norm that had been governing the ISC for some time prior. Here is what the 1960 Court has to say about stare decisis:

the common-law rule … is but an illogical anachronism, originating in a vastly different social order, and pock-marked by judicial refinements, [and] it should not be perpetuated in the name of ‘stare decisis.’ That doctrine does not confine our courts to the ‘Calf Path,’ nor to any rule currently enjoying a numerical superiority of adherents. ‘Stare decisis’ ought not to be the excuse for decision where reason is lacking.84

The “test” employed here is an extremely weak one, entirely contravening the doctrine as it is normally understood. The test explicitly rejects, under the sobriquet of the “Calf Path” any independent force of path dependence, thus seemingly shifting any unwillingness to correct errors toward what I have characterized as C=1 or the “natural rate.” That this is reflective of a general attitude is supported by the discussion of stare decisis on which the above case built, authorizing departure “from stare decisis because we believe justice and policy require such departure.”85 To the same effect is the standard, given in 1947 just prior to the increase in activity, that “when doubts are raised in the minds of the court as to the correctness of its decision, it is its duty to re-examine the question involved in the case.”86 Again, “doubts” should not be enough

85 Molitor v. Kaneland Community Unit Dist. No. 302, 18 Ill.2d 11, 26 (1959).
under any meaningful test – if the Court knows the precedent is wrong, that is another matter.87

Citation analysis is diagnostic and probably incapable of providing a definitive answer as to why the error correction rate would increase, either tacitly or explicitly. One possibility, advanced with a certain amount of irony, is that an increased willingness to overrule past decision may have been a consequence of the legal realist style of jurisprudence. Justice Scalia, for one, appears to associate the baleful influence of realism with this dynamism at a similar point in history: “Whether cause or effect, there is no doubt that the era … was marked by a newfound disregard for stare decisis.”88

Whether characterized as “realist” or not, further inspection of the type of cases overruled provide some clues as to the rationale behind increased norm replacement. There were, for instance, several cases expanding liability on equitable grounds,89 with the Court eventually adopting comparative negligence, despite the failure of several legislative attempts to do so.90 If there is a consistent theme, it is that decisions during the period of the spike (and after) were more reluctant to suggest the legislature fix “the problem” or to assume legislative acquiescence to an earlier precedent had occurred by

---

87 See Caleb Nelson, Stare Decisis and Demonstrably Erroneous Precedents, 87 Va. L. Rev. 1, 53 (2001) (arguing that in addition to normal bases for overruling, a court should be permitted to overrule obviously wrong decisions).
90 Alvis v. Ribar, 85 Ill.2d 1, 24 (1981) (discarding contributory negligence and overruling Maki v. Frelk, 40 Ill.2d 193 (1968)).
the incorporation of the doctrine into the common law.  

If previous versions of stare decisis were calibrated to assign some subset of court errors for correction by the legislature, and this subset shrank, the rate of overruling as well as the doctrinal justification could well reflect a new conception of the judicial role.

If the 1950s were the first period where this attitude was present, then courts in this period (and not later courts) were the ones faced with a large body of precedent filtered through a different standard, and therefore had the opportunity to correct more errors, implying that the decline and subsequent equilibrium level of overrulings is a direct consequence of errors (under the new standard) having been fixed earlier. In other words, there is actually no need to assume from the data that the error correction rate differs between 1960 and 200, even though the rates of overruling do. This can be illustrated by a simple example. Assume that under the post-1950 standard, 2% of opinions will eventually found to be erroneous, but in the pre-1950 standard only 1% of opinions were treated in this way. In order to move the capital stock toward a new asymptote, there is likely to be a period of rapid overruling of what was previously held acceptable. This will create S-shaped cumulative hazard curves, with inflection points around the period of transition. In further periods under the new standard

---

91 See McDaniel, 34 Ill.2d at 495 (disagreeing “with the majority as to the proper forum for a determination of the changes best suited to serve the objects of modern society and conditions of present-day life”) (Underwood, J., dissenting); see also Republic Steel v. Indus. Comm., 30 Ill.2d 311, 314 (1964) (“Petitioner seeks only a change in existing law. Its arguments in support thereof, under our form of government, are properly addressed to the legislative branch.”) (Underwood, J., dissenting); Alvis, 85 Ill.2d at 29 (accord) (Underwood, J. dissenting). The point to be drawn from this series of sole dissents is, I think, that although phrased as a difference in stare decisis, Justice Underwood differed more basically with his colleagues about separation of powers. For much more on the doctrinal variants leading judges to adopt one or another view of the relation between decisional and statutory law, see William R. Eskridge, Dynamic Statutory Interpretation 241-252 (1994).
however, this “backlog” will gradually diminish, creating a new, higher equilibrium rate of overruling.

Consequently, as a parsimonious explanation, we can characterize the extrinsic hazard as related to an adjustment in the internal norm governing legal change, based in a fundamental attitude regarding the relative responsibility of the judiciary and the legislative branch for the enunciation of norms, and the correcting of sub-optimal norms. Hypothetically, the predominance of a view allocating more responsibility to the judiciary led in turn to a greater rate of error-correction, including errors from the more distant past that had been left to the legislative branch by previous courts. This in turn generates the pattern and higher level of precedent lethality in the 1950-1964 era.

Apart from increasing the error correction rate, there appears to have been another distinctive post-1950 change in the treatment of precedent, reflected in a new pattern to overruling, going along with the change in the rate of overruling. Both behaviorally and doctrinally, the court appears to have reversed the value it at one time
accorded to the age of precedents. Under the reliance theory of the nineteenth century, the protective effect of *stare decisis* in principle increased with the age of the precedent under potential reconsideration. Initially, the Court’s expressed attitude was much like the proverb, “Old truths, old laws, old boots, old books, and old friends are the best.”

Or as Justice Scalia expressed this view:

> Indeed, I had thought that the respect accorded prior decisions increases, rather than decreases, with their antiquity, as the society adjusts itself to their existence, and the surrounding law becomes premised upon their validity. The freshness of error not only deprives it of the respect to which long-established practice is entitled, but also counsels that the opportunity of correction be seized at once, before state and federal laws and practices have been adjusted to embody it.  

> However, during the last few decades this weight has completely been upended, so that, as noted above, it was a common trope by 1960 to refer to a rule as “an illogical anachronism, originating in a vastly different social order.” Now it is generally put forward that recent precedents are to be treated more charitably than ancient ones, as “a Supreme Court decision probably has the strongest claim to generating path dependency immediately after it has been created.” Likewise, an Illinois judge proclaimed that “[c]hanging times and circumstances may convince us, in appropriate cases, to overrule past precedent. I cannot in good conscience, however, argue for the overruling of a case written in ink which is not yet dry.”

---

92 *South Carolina v. Gaithers*, 490 U.S. 805, 824 (1989) (Scalia, J., dissenting) (Scalia here recognizes and rejects the current view that the age of a precedent is a negative, or at best, neutral factor in deciding whether or not to depart from it)

93 Gerhardt, *supra* note 17, 7 U.PA J. CONST. L. at 952. This does not control for the relative hazard, either, and so is subject to an empirical critique, but Gerhardt also appears to attach a normative dimension to this claim.

94 *People ex rel. Daley v. Strayhorn*, 121 Ill.2d 470, 490 (1988) (Clark, J., concurring specially)
appeared inexplicable under the earlier theory of precedential departure, which supposed the best time to wipe something away would have been while it was still wet.

*Figure 10. Median Age of Overruled Precedents*

![Target of Overruling](image)

Again, it is difficult to separate out whether doctrine has driven behavior or merely expressed it, but the rival perspectives taken to the value of the past are certainly distinct and in rough accord with at least the elimination of any enhanced protective effect of age. The median age of the precedents eliminated by overruling decisions the post-1950 period has increased drastically. In similar fashion as done previously, Figure 10 presents a “rolling median” for each of the overruling or terminating decisions, to identify the approximate age of the precedents a court overrules, when it does so.

More formally, these differences can be expressed by separating out the precedents overruled post-1950 (279) from those that were overruled by decisions
dating from before 1950 (134). Marginally, of course, we would expect for the usual reasons that the earlier group would have a lower median age because of the greater age of precedents available for overturning in the later period. However, the differences are more remarkable than can be easily accounted for by this effect, especially since in both periods most hazards are accumulated well before the 80 or 100 year mark. Comparing survival curves, the median age for the post 1950 period is 31 years. The median age of precedents overruled for the entire period from 1820 to 1950 was 9 years.95

The quite distinct hazard patterns are shown in the last figure, Figure 11. Whether the phenomenon occurred for doctrinal or other reasons, the interpretation is straightforward – prior to the modern era, if a precedent survived for 25 to 30 years, it was essentially “home free” and at very little risk of ever being overturned. In recent decades, however, that has changed, such that the total hazard to which a precedent is exposed accumulates more slowly and is extended over a long period of time. Possibly, the jurisprudential argument against ancient precedents was simply put forward in order to justify the necessary, albeit temporary, clearing of the “backlog” of old dubious precedents once a new threshold for error was introduced. At the same time, the changed attitude toward received wisdom and permanency might reflect a broader and more profound cultural shift, which might or might not in turn be founded in the economic rationale that a more rapidly changing society should treat older norms as

95 The difference in these survival patterns is well beyond the p <.00001 level. Breslow test= 82.26. The mean age for recently overturned precedents is 35.9 years with a s.e. of 1.65, while the mean value prior 1950 was 14.72 years with an s.e. of 1.37.
more likely to be inefficient solutions. Comparative study into whether this transformation is evidenced nationally could provide future insight into a difficult and interesting institutional shift.

Figure 11  Hazards of Precedent Before and After 1950
At no time of course, has legal change lacked some brake on its velocity. This is true even when *stare decisis* ceases to be mentioned or is expressed in ways that make it a formal nullity. The rate of legal change does vary, however, depending on the governing internal meta-norm of the legal decision-makers. This internal parameter can be measured and evaluated by examination of the relative hazards experienced by different kinds of precedents (young, procedural, constitutional, statutory, those with dissents) and the changes in the general or type-specific hazard over time. If future patterns of hazard are relatively constant, the models and definitions developed by the system I have here proposed can assign a relative risk or “life expectancy” to any current opinion, and therefore an estimate of future legal change, or at a practical level, the potential vulnerability of a precedent to attack. At the moment, considerable work both in data collection and model validation remains before a prospective analysis could be developed and tested.

The current work, and the work that will follow after it, is carried out in the shadow of Holmes’s predictive theory of the law, and is, in an important sense, an extension and specification of that theory. If “laws” are the “prophecies of what the courts will do in fact, and nothing more pretentious,”96 then the ultimate project foreshadowed here is to provide a probabilistic dimension to each “law” indicating the probability that some future court, at a particular time, will *continue* to do what it is has done, so that prophecies are made with the appropriate level of uncertainty attached to them. This does not mean of course, that one has to draw any particular inference about

---

judicial reasons for doing what they do, because it is pointless to be overly concerned with reasons, so long as a complete predictive model is generated.97

In addition, the method allows one to readily identify – and statistically validate – distinct eras in court history, attaching a variety of features to that era, even without examination of doctrinal expressions (although these are not unhelpful as insight into causal explanation). The practical effect of doctrinal variants or judicial ideology can be tested as with any other factor, in raising or lowering the level of risk to precedent generally, or perhaps only to certain types of precedents.

These effects would appear as significant interaction terms within the hazard regression, between type of precedent and type of environment. Because the force accorded to stare decisis varies doctrinally between types of cases and with “the demands of the times,” such an analysis would allow the observer to measure the correspondence (if any) between what courts say and what they do.

97 Cross, supra note 17, 92 NW. U. L. Rev. at 282-283 & n.185 (pointing out that “researchers are not trying to explain ‘what judges do,’ rather they are trying to explain outcomes, without respect to the processes undertaken and justifications given”)
APPENDIX I

Opinions Applying Rule of Stare Decisis Before Departure

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume</th>
<th>Illinois Case Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>0</td>
<td>207 Ill.2d 122</td>
</tr>
<tr>
<td>2000</td>
<td>0</td>
<td>189 Ill.2d 312</td>
</tr>
<tr>
<td>1981</td>
<td>0</td>
<td>85 Ill.2d 1</td>
</tr>
<tr>
<td>1980</td>
<td>0</td>
<td>81 Ill.2d 105</td>
</tr>
<tr>
<td>1977</td>
<td>0</td>
<td>68 Ill.2d 361</td>
</tr>
<tr>
<td>1975</td>
<td>0</td>
<td>61 Ill.2d 452</td>
</tr>
<tr>
<td>1974</td>
<td>0</td>
<td>56 Ill.2d 423</td>
</tr>
<tr>
<td>1960</td>
<td>0</td>
<td>20 Ill.2d 406</td>
</tr>
<tr>
<td>1960</td>
<td>0</td>
<td>20 Ill.2d 301</td>
</tr>
<tr>
<td>1959</td>
<td>0</td>
<td>18 Ill.2d 11</td>
</tr>
<tr>
<td>1956</td>
<td>0</td>
<td>7 Ill.2d 608</td>
</tr>
<tr>
<td>1947</td>
<td>0</td>
<td>396 Ill. 354</td>
</tr>
<tr>
<td>1933</td>
<td>0</td>
<td>353 Ill. 312</td>
</tr>
<tr>
<td>1921</td>
<td>0</td>
<td>299 Ill. 19</td>
</tr>
<tr>
<td>1919</td>
<td>0</td>
<td>288 Ill. 422</td>
</tr>
<tr>
<td>1881</td>
<td>0</td>
<td>101 Ill. 206</td>
</tr>
<tr>
<td>1866</td>
<td>0</td>
<td>41 Ill. 382</td>
</tr>
<tr>
<td>1853</td>
<td>0</td>
<td>14 Ill. 304</td>
</tr>
<tr>
<td>1832</td>
<td>0</td>
<td>2 Ill. 42</td>
</tr>
</tbody>
</table>
APPENDIX II

An Algorithm for Universal Shephardization

A. Finding All Failed Cases

1. Select a jurisdiction, consisting of a court able to overrule itself, and acquire database of the compete output of this institution (example: Illinois Supreme Court).
2. Do “search” on Westlaw using “Court” field, “CO,” using the unique designator for the jurisdiction of interest (example: CO(“Ill.”) excludes intermediate appellate opinions). The search may have to be narrowed using the citation, “CI,” field to exclude “Table” cases, primarily because Westlaw prevents the generation of more than 10,000 returned citations. This produces the search string: CO(“Ill.”) % CI(“Table”). For the same reason, it may be necessary to break the search into periods of time in which the jurisdiction generated under 10,000 opinions. In the current example, 2000 to 2004 was one period and ten year periods were then used back to 1820, the origination point of the court; this generates 19 searches returning 49681 opinions. This forms the database of analysis.
3. Save or deliver this output as ASCII text file. This will convert visual markers of negative history such as red flags to searchable text “RED FLG.” Each citation in the output will be preceded by number “1., 2.,” and so forth. Open the ASCII file in a word processor such as Word. Eliminate, using search and replace functions, the default line spacing of the output, and put back in paragraph formatting based on these numbers. You can also eliminate (by “replacing” with nothing) extraneous characters. This will allow reading of each citation as a record. Find and surround all instances of “RED” that appear in the appropriate place with a field delimiter of your choice such as a semicolon, as in “;RED;”. (All of this can be done by Word Macro, and the delimiter can be used to create additional fields). Save this reformatted output as a text file.
4. Open the reformatted text file in a spreadsheet such as Excel, indicating that your chosen delimiter will separate fields. This will result in a spreadsheet in which all “red-flagged cases” will have “RED” as the value in some column and all other cases (“good law”) will have something else. Then “sort” cases by this column, and it should create a list of these cases separated from all the rest; these can then be cut and put into their own separate file so their characteristics can be examined, or for further analysis. If it was necessary to separate searches into time periods, all the “bad” cases can be merged together at this time by the simple expedient of pasting them into a single file.

5 cases from late in 1819 were issued and are included in this total. These cases are still good law and thus not particularly relevant.
B. Identifying Overruled and Overruling Cases

5. Taking the list of “bad” cases created at the end of Step 4, it can be sent as a document to the WestCheck service in order to generate a report on the “negative history” of the cases. (This can also be done by cutting and pasting, in batches limited to under 100, the citations). It will generally be convenient if you extract from each record (using text manipulation functions), the short cite (e.g. 734 Ill.2d 214) for purposes of input to WestCheck.

6. This will generate a number of responses equal to the number of bad cases in your input. This response file then becomes the subject of further manipulation. For whatever reason, I found it necessary to save this output directly from my browser (copying the relevant parts of the “frame” in which the output appears, and pasting it as text only into my word processor).

7. Similar to Step 3, this text file will need to be reformatted to eliminate the default paragraph separation, and put in paragraphs based on “citation entry” or some other marker that differentiates each “negative history report” into discrete records equal to the number of bad cases sent in as input. Fields can be delimited in various ways, but the most important things to assure are getting the citation being “checked” into its own field, the primary basis for the case being red-flagged such as “overruled in part” into its own field, and the citation creating the primary basis for red-flagging (the terminating or overruling case) into its own field. The reformatted text file is then saved again as text.

8. The reformatted WestCheck report can then be opened in Excel, with a number of row records equal to the number of bad cases. Each record, along with extraneous material, will consist of a column containing the bad case, the reason why it is bad, and the case that made it “go bad.” The column of reasons can be used as the basis for a record sort to separate sources of negative history such as reversals or statutory supersession from overruling and related phenomena. These can be cut and saved for separate analysis.

9. If it has not already been done via macros deployed in Step 7, the text functions in Excel can be used to extract dates of issuance for both the terminated and terminating cases, which can then be used to calculate the age of each failed precedent. Because overruling cases frequently overrule multiple prior cases, it will be useful to sort the records by overruling cases and eliminate duplicates of the overruling cases, thereby getting an accurate count of these. This can be done manually or by macro within Excel, and the result saved separately for further analysis.

10. Since dates of issuance have been extracted for both the overruled and overruling opinions, they can be sorted into periods (or using simple spreadsheet
functions to count dates within a predefined range) and the “raw” rate of failed cases and overruling can be measured for each period. To get an adjusted hazard against the baseline of other opinions in the relevant court, you need to control for how many opinions the court issued during the period. If you were forced to periodize your search in Step 2, the total number of “hits” will give this number. Otherwise you will simply run a similar search limited by the relevant date period and record the number of opinions the court issued.