

**PERSPECTIVES ON LAW AND LEGAL INSTITUTIONS AS COMPLEX
ADAPTIVE SYSTEMS**

by

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ABSTRACT

PERSPECTIVES ON LAW AND LEGAL INSTITUTIONS AS COMPLEX ADAPTIVE SYSTEMS

by

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This dissertation employs various theoretical and methodological perspectives to consider the “evolution” of the law and “law as a complex adaptive system.” Chapter 2 addresses the strategic institutional conditions that produced Chief Justice Rehnquist’s majority opinion in *Dickerson v. United States*. In the wake of the Chief Justice’s ruling, legal scholars grappled to interpret this apparently anomalous decision. This process produced a litany of deeply unsatisfactory explanations for the Chief’s behavior. Chapter 2 rejects all of these existing explanations and instead outlines a game theoretic account for the Chief’s decision in this very important *Miranda* related case.

Applying network theory, Chapter 3 considers the social topology of the American federal judiciary. Scholars have long asserted that social structure is an important feature of a variety of societal institutions. However, to date, such social considerations have not been formally integrated in positive legal theory. Using the flow of law clerks as a proxy for social and professional linkages between jurists, Chapter 3 offers a variety of visualizations and analytics useful for considering the physical properties of the judicial social network.

Chapter 4 considers the ‘evolution’ of the law in the early jurisprudence of the United States Supreme Court. Relevant dynamics include but are not limited to doctrinal importation, path dependence, cross-fertilization, mutation, fitness and selection. Chapter 4 explores a subset of these dynamics in the applied context of the early United States Supreme Court (1791-1835). Justices on the early United States Supreme Court relied upon a wide variety of sources as evidence in support of their arguments. Chapter 4 offers both descriptive data regarding the magnitude of references and identifies the extent to which those references imported ideas from foreign sources. Next, it applies the tools of network science to measure the structural importance of these foreign law infused decisions. While the empirical results are relevant to the ongoing debate regarding the Supreme Court's reliance upon foreign sources, there is something far more fundamental at stake. Specifically, Chapter 4 introduces the “legal genome project” a new conceptual framework useful for understanding the “evolution” of the law.

CHAPTER ONE

INTRODUCTION

Continuity and change are fundamental features of social institutions. While any theory of change is primarily a theory of continuity, evaluating the conditions that give rise to institutional change is a critical inquiry. The exploration of the mechanics of social and institutional change is the hallmark of the social scientific enterprise. Methodology, intellectual paradigms are the vehicles scholars employ to provide perspective on these processes. One emerging approach – the complex systems perspective – is a vehicle to consider the dynamic evolution of various institutions including various legal and political institutions. Indeed, a growing literature argues that the complex systems paradigm is the appropriate lens through which to consider the development of the common law and the dynamic interaction of its constitutive actors. This perspective of law as a complex adaptive system is one that does justice to the dynamic interplay between judges (and their preferences and strategies) as well as the time evolving content of their jurisprudence. Seeking to contribute to this growing literature, this dissertation offers several perspectives on the proposition that law is a complex adaptive system.

Institutional Rules and Strategic Behavior

The complex systems paradigm is in large part interested in how behavior observed at the micro level aggregates into larger macro patterns. Thus, this dissertation

begins in Chapter 2 with a case study of one specific unit of micro judicial behavior – Justice Rehnquist’s otherwise anomalous decision in *Dickerson v. United States*.

Despite his long-standing opposition to the Miranda doctrine, in *Dickerson v. United States* Justice Rehnquist both voted to save the Miranda doctrine and author the majority opinion. Why? As written, many prevailing accounts accept Justice Rehnquist’s opinion in *Dickerson v. United States* at face value and immediately disavow the potential of a strategic explanation for his behavior. The difficulty with the non-strategic accounts is their failure to outline explicitly the evidence supporting the uniqueness of their theory. Specifically, these explanations largely ignore the alternative set of preferences that could have produced the Chief’s decision. This is troubling because prior social science scholarship demonstrates that a Chief Justice possesses a unique set of institutional powers that provides significant incentive for him to behave sophisticatedly.

At a minimum, many prevailing explanations for *Dickerson* at a minimum are incomplete because they fail to determine whether his vote and opinion were the result of moderation, fidelity to traditional legal principles, or, in fact, strategic behavior. This Chapter pursues a uniqueness claim, arguing the available evidence supports a strategic explanation for Justice Rehnquist’s behavior in *Dickerson*. To do this, Chapter 2 first reviews the methodological debate that exists within the social science scholarship, a debate relevant to the competing explanations for the *Dickerson* decision. Next, the Chapter explores a strategic or quasi-game theoretic approach by describing the multistage sophisticated process that produces all Supreme Court decisions. It culminates

in a general form diagram that maps the behavioral choice faced by all similarly situated Chief Justices.

This diagram, inspired by game theoretic literature on judicial decision-making, is carried forward into the balance of the Chapter. Starting with a description of the Supreme Court's Miranda jurisprudence, Chapter 2 next reviews Justice Rehnquist's Miranda-related decisions which taken together demonstrate the truly anomalous nature of his Dickerson opinion. The Chapter then outlines a strategic account, an approach rejecting many prevailing explanations of Rehnquist's behavior. Strategic and non-strategic behaviors are often observationally equivalent. Thus, in order firmly to support its strategic theory, this Chapter concludes with a discussion of several important post-Dickerson decisions, where the Chief Justice surprisingly supports the preservation of certain exceptions to Miranda even after his Dickerson opinion supposedly afforded Miranda full constitutional status. The cases are critical to the analysis because they help determine what end Chief Justice Rehnquist actually achieved in his Dickerson opinion. He successfully froze a set of pre-Dickerson Miranda exceptions that he personally developed during his thirty-year tenure on the Court. It is from this perspective that commentators in fact are correct to argue that Dickerson is critical to understanding the legacy of the late Chief Justice.

The “Judicial Game” is a Game on a Graph

The development of American law cannot be divorced from the social and professional relationships between its constitutive actors. Recent scholarship has called

for a more holistic “social economics” approach to study judicial behavior. For example, Professors Baum and Cameron cite a number of studies, which, taken together, “cast considerable doubt on what might be called the traditional political science approach to decision-making on collegial courts.”¹ Indeed, the consideration of social factors is featured in a variety of related scholarship. For example, Judge Posner as well as other scholars² argue a judge’s reputation among his or her fellow jurists is a core component of the judicial utility function and that reputational concerns among his or her fellow judges directly impact the set of judicial outputs he or she would be willing to support.³

Of course, it is hardly new or novel to assert that, in general terms, maintaining high status among one’s peers as well as sustaining relationships with one’s close colleagues might, together with other factors, impact an individual’s behavioral calculus. Indeed, while other components certainly comprise the judicial utility function, the literature emphasizes that a jurist’s desire to be considered a “learned judge” is a source of motivation for his or her decision-making. The art of judging is marked by both general adherence to established legal principles as well as attempts to recombine existing approaches in novel ways. Of course, *a priori* it is not completely clear whether

¹ See Charles M. Cameron & Craig P. Cummings, *Diversity and Judicial Decision-Making: Evidence from Affirmative Action in the Federal Courts of Appeals, 1971–1999* (Mar. 30, 2003) (unpublished manuscript, on file with author). LAWRENCE BAUM, JUDGES AND THEIR AUDIENCES: A PERSPECTIVE ON JUDICIAL BEHAVIOR (2006).

² RICHARD A. POSNER, OVERCOMING LAW (1995).

³ See RICHARD A. POSNER, OVERCOMING LAW (1995). See also Jason Whitehead, *Cynics and Rogues: How “Bad” Judges Can Help Us Better Understand the Rule of Law*, Paper Presented at the 2008 Annual Meeting of the Law and Society Association (offering qualitative evidence that judges consider the views of other judges when rendering their decisions) (manuscript on file with author); LAWRENCE BAUM, JUDGES AND THEIR AUDIENCES: A PERSPECTIVE ON JUDICIAL BEHAVIOR (2006).

such attempt at recombination or mutation will be seen as “novel” or wholly inappropriate. In searching the “outcome space” in an effort to maximize their respective utility functions, is it is not always clear what class of decisions furthers a judge’s reputational interests. However, judges do have the ability to obtain information regarding what would constitute a socially acceptable application of existing legal principles. Specifically, judges can take social cues and mimic the legal interpretations previously offered by their colleagues.

Generalizing from this basic idea Chapter 2 argues, “social structure, and the formal and informal interactions between judicial actors, at least in part, charts the course of doctrinal development.” Specifically, if jurists formally or informally rely on the view of their colleagues with higher prestige then properly conceptualizing the nature and mapping the dynamics of such “peer effects” would appear to be a core component of positive legal theory. Thus, along with other important decisional factors previously identified in the judicial politics scholarship, this dissertation is dedicated to understanding the dynamics of judicial *self-organization*⁴ and its impact upon the development of the law.

⁴ Self-organization is a term of art commonly used in to describe the collective behavior of a variety of social and physical systems. While there exists slightly varying definitions, the term is often used to describe a system whose behavior becomes increasingly organized without being explicitly managed by an outside source. Examples of self-organization can be seen in physical science fields such as chemistry (molecular self-assembly), physics (spontaneous magnetization) and biology (homeostasis). Such ideas have also been invoked in the social sciences to describe flocking behavior (sociology) and the behavior of markets (economics). For example, the often-quoted Austrian economist Friedrich Hayek described capitalism as a "self-organizing system of voluntary cooperation." (Hayek 1945).

Of course, given there is no “pause button” in the external environment there is reason to believe reputation effects, esteem, prestige and influence are generated through dynamic processes that include negative and positive feedback. As such, they should be analyzed with not only traditional statistical methods but also the tools used to study in complex adaptive systems.

The consistently changing composition of the overall federal judiciary implies that the relative social standing of judicial actors and, in turn, the legal doctrines they support are in a consistent state of flux. In this respect, the federal judiciary exhibits behavior that might be considered *emergent*.⁵ While a judge in a given case may *rule* in isolation of other judges, she does not exist in a state of complete social and professional isolation from their peers. Instead it is far more likely that judicial choice is, at least in part, impacted by a combination of jurists who are socially prominent and socially proximate.⁶

⁵ There is not a uniform agreement regarding the appropriate definition of emergence. See JOSHUA EPSTEIN & ROBERT AXTELL, *GROWING ARTIFICIAL SOCIETIES FROM THE BOTTOM UP* (1996) (defining emergent phenomena to be “stable macroscopic patterns arising from the local interactions of agents.”). Outlining a variety of rationales including the anti-scientific history of British emergentism, Professor Epstein offers deep concerns regarding its continued use in the field of complex systems. While we do not take a pass on its continued use, we recognize the merit of Professor Epstein’s argument. See JOSHUA EPSTEIN, *GENERATIVE SOCIAL SCIENCE* 31-37 (2006).

⁶ As noted earlier, recent work in the public law literature acknowledges a need for contextual understandings of judicial decision making. See, e.g., Charles M. Cameron & Craig P. Cummings, *Diversity and Judicial Decision-Making: Evidence from Affirmative Action in the Federal Courts of Appeals, 1971–1999*, Paper Presented at the 2003 Meeting of the Midwest Political Science Association (Apr. 3–6, 2003) (applying a “social economics approach” to the behavior of judges on the U.S. Court of Appeals). Cameron and Cummings cite a number of studies that “cast considerable doubt on what might be called the traditional political science approach to decision-making on collegial courts.” *Id.* See, e.g., Sean Farhang & Gregory Wawro, *Institutional Dynamics on the U.S. Court of Appeals: Minority Representation Under Panel Decision Making*, 20 J. L. ECON. & ORG. 299 (2004); Richard L. Revesz, *Environmental*

In the face of such dynamics, what is needed is a methodology that can capture the richness of the landscape. Among possible approaches, network analysis offers one manner of representing the interactions between various entities across a complex adaptive landscape.⁷ Specifically, as applied to the path of the common law as well as theories of judicial decision-making, the networks paradigm helps evaluate the manner in which individual level judge choice maps to the judiciary's aggregate doctrinal outputs.⁸ The analysis of the time evolving dynamics of prestige and influence are designed to

Regulation, Ideology, and the D.C. Circuit, 83 VA. L. REV. 1717 (1997). Of course, other actors and institutions also impact a given jurist's conception of what constitutes a sound legal rule.

⁷ The analysis of social networks is long standing with notable early work conducted by scholars such as Jacob Moreno, Fritz Heider, and Kurt Lewin. *See, e.g.*, JACOB MORENO, WHO SHALL SURVIVE? (1934) (developing the "sociogram," an apparatus that allows social relationships to be drawn using analytic geometry); KURT LEWIN, FIELD THEORY IN SOCIAL SCIENCE (1951) (extending Moreno's work and applying a host of mathematical techniques including graph theory, topology, and set theory). Popular accounts of networks concepts can largely be attributed to the work of Stanley Milgram. *See* Stanley Milgram, *The Small World Problem*, 22 PSYCHOL. TODAY 61 (1967). Milgram is often credited with coining "six degrees of separation." However, many attribute the term to Hungarian author, Frigyes Karinthy, whose volume of short stories invoked such concepts. *See* FRIGYES KARINTHY, MINDEN MÁSKÉPPEN VAN [EVERYTHING IS DIFFERENT] (1929). A host of recent popular literature continues the public's widespread interest in network science. *See generally* FORBES, *Networks*, May 7, 2007 (devoting its Ninetieth Anniversary Issue to the "New" Age of Networks). For a non-exhaustive list of recent popular books in the subject, see also ALBERT-LASZLO BARABÁSI, LINKED: THE NEW SCIENCE OF NETWORKS (2002); MARK BUCHANAN, NEXUS: SMALL WORLDS AND THE GROUNDBREAKING SCIENCE OF NETWORKS (2002); and MALCOLM GLADWELL, THE TIPPING POINT: HOW LITTLE THINGS CAN MAKE A BIG DIFFERENCE (2000). Recent developments within the academy have also driven increased interest in network analysis. Among these developments the work of Watts and Strogatz is of utmost interest. *See* Duncan J. Watts & Stephen H. Strogatz, *Collective Dynamics of 'Small World' Networks*, 393 NATURE 440 (1998). *See also* Laszlo Barabási & Reka Albert, *Emergence of Scaling in Random Networks*, 286 SCIENCE 509 (1999). For instructive texts on the subject see, e.g., THE STRUCTURE AND DYNAMICS OF NETWORKS (Mark Newman, Albert-Laszlo Barabási, & Duncan J. Watts, eds., 2006); STANLEY WASSERMAN & KATHERINE FAUST, SOCIAL NETWORK ANALYSIS (1994).

⁸ *See generally* THOMAS C. SCHELLING, MIRCOTIVES AND MACROBEHAVIOR (1978).

contribute to a broader literature arguing various domains of legal analysis would benefit from concepts and techniques typically reserved for the study of complex systems.⁹

On the Path to a Legal Genome Project: The Early Jurisprudence of the United States Supreme Court (1791-1835)

While Chapters 2 and 3 focuses upon the behavior of jurists, Chapter 4 provides an alternative perspective on the ‘evolution’ of the law. Instead, of focusing upon the judges who decisions generate the common law, this Chapter considers the Court’s doctrinal outputs. In particular, this Chapter reviews the early jurisprudence of the United States Supreme Court – a period where one observes the blending of foreign legal principles with legal rules of domestic origin. Relying upon the full corpus decisions of through the end of Chief Justice Marshall’s term (1791 - 1835), this study both identifies and classifies the more than 35,000 references contained therein. This analysis highlights

⁹ See, e.g., Lawrence A. Cunningham, *From Random Walks to Chaotic Crashes: The Linear Genealogy of the Efficient Capital Market Hypothesis*, 62 GEO. WASH. L. REV. 546 (1994) (discussing chaos theory in the context of capital market regulation); Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641 (1995) (discussing legal evolution and invoking both path dependence and complexity systems theory); Vincent Di Lorenzo, *Complexity and Legislative Signatures: Lending Discrimination Laws as a Test Case*, 12 J.L. & POL. 637 (1996) (employing chaos theory to review legislative responses to alleged lending discrimination); J. B. Ruhl, *The Fitness of Law: Using Complexity Theory to Describe the Evolution of Law and Society and Its Practical Meaning for Democracy*, 49 VAND. L. REV. 1407 (1996) (discussing both complexity and the general evolutionary model); David G. Post & Michael B. Eisen, *How Long is the Coastline of the Law? Thoughts on the Fractal Nature of Legal Systems*, 29 J. LEGAL STUD. 545 (2000) (uncovering the fractal structure of citations to precedent in judicial opinions); Thomas A. Smith, *The Web of Law*, 44 SAN DIEGO L. REV. 309 (2007) (demonstrating the distribution of citations across the roughly four million cases in American law as consistent with the power law distribution); Elizabeth Leicht, Gavin Clarkson, Kerby Shedden & M. E. J. Newman, *Large-Scale Structure of Time Evolving Citation Networks*, 59 EUROPEAN J. OF PHYS. B 75 (2007) (mapping the structure of the United States Reports and detecting temporal communities in case to case citations); See also Daniel A. Farber, *Earthquakes and Tremors in Statutory Interpretation: An Empirical Study of the Dynamics of Interpretation*, 89 MINN. L. REV. 848 (2005); Bernard Trujillo, *Patterns in a Complex System: An Empirical Study of Valuation in Business Bankruptcy Cases*, 53 UCLA L. REV. 357 (2005); Daniel Katz, Derek Stafford, & Eric Provins, *Social Architecture, Judicial Peer Effects and Law’s Evolution: Toward a Positive Theory of Judicial Social Structure*, 23 Geo. State L. Rev. 975 (2008).

both the extent of reference to foreign legal sources and situates these references in the broader universe of cited sources. Justices on the early United States Supreme Court relied upon a variety of sources as evidence in support of their arguments. Rather than rely upon lower courts or the internal logic of its decisions, the early United States Supreme Court jumpstarted its jurisprudence with the substantial aid of foreign legal commentators and sources.

Across sets of cases and even within individual decisions, the early Court either relied exclusively on foreign law or in many instances draws support for its position by legal principles developed by foreign legal actors. This basic insight encourages one to more formally consider the dynamics present in the precedent based development of the Supreme Court's jurisprudence. Namely, beyond its appeal as a historical investigation, this project has much broader aims. While this paper does not fully resolve all of the difficult theoretical and empirical questions, it provides a perspective informative to both positive legal theory and the long-standing literature on common law 'evolution.' Indeed, in order to develop a positive model of legal doctrine and thereby "take law seriously" it is necessary to have a well-specified notion of the relevant doctrinal topology. To consider such questions requires a framework that can meet the methodological ante. Chapter 4 proposes a "legal genome project" – an informatics based project designed to trace our legal origins and better understand the "evolution" of the common law.

CHAPTER TWO

INSTITUTIONAL RULES, STRATEGIC BEHAVIOR AND THE LEGACY OF CHIEF JUSTICE WILLIAM REHNQUIST: SETTING THE RECORD STRAIGHT ON *DICKERSON V.* UNITED STATES¹

Unchanged for more than a decade, the 2005-2006 term witnessed significant alteration to the composition of the United States Supreme Court. In the span of several months, the High Court experienced substantial changes in its membership brought about in part by the death of its most prominent member, Chief Justice William Rehnquist. In periods of transition, it is natural to speculate on the future course of this institution; but equally compelling, these changes elicit reflection as to the historical significance of the recently completed era. In the most recent iteration, substantial attention centered upon the late Chief Justice, whose death focused interest not only on the institution that he guided for nearly two decades but also upon his personal jurisprudence. Comments regarding his legacy were wide ranging and covered the gambit of cases that came before the High Court during his stewardship.²

¹ This chapter was previously published as Daniel Martin Katz, *Institutional Rules, Strategic Behavior and the Legacy of Chief Justice William Rehnquist: Setting the Record Straight on Dickerson v. United States*, 22 J. L. & POL. 303 (2006).

² See, e.g., Craig M. Bradley, *Rehnquist Scaled Back Rights of the Accused*, 41 TRIAL, Dec. 2005, at 56, 56 (“While Rehnquist failed in his effort to radically reconstruct criminal procedure law, he nevertheless enjoyed perhaps his greatest success in his 33 years on the Court by trimming back Warren Court initiatives in virtually every area of criminal procedure and habeas corpus.”); Erwin Chemerinsky, *Rehnquist’s Steady Conservatism Reshaped the Law*, 41 TRIAL, Nov. 2005, at 70, 70 (“William Rehnquist will be remembered as one of the most important Supreme Court justices in American history, partly for his length of service . . . But more important, Rehnquist profoundly affected constitutional law by pushing it in a more conservative direction.”); R. Ted Cruz, *In Memoriam: William H. Rehnquist*, 119 HARV. L. REV. 10, 16 (2005) (“His views did not always prevail, but his steady hand at the helm—his vision, leadership, and unwavering principles—made this in every respect the Rehnquist Court.”); Justice Ruth Bader Ginsburg, *In*

One case, *Dickerson v. United States*,³ garnered particular attention from commentators.⁴ In fact, even before his passing some argued this decision was critical to understanding the Rehnquist legacy.⁵ In *Dickerson*, the Chief Justice authored a seven-member majority opinion which sustained *Miranda v. Arizona*.⁶ The decision was a surprise. *Miranda* had been a pillar of the Warren Court revolution, and Chief Justice Rehnquist previously varied from meek support to outright dissent for the 1966 ruling.⁷ Thus, given his history, he seemed unlikely to author a supportive opinion in perhaps the key *Miranda* decision of the decade.

Memoriam: William H. Rehnquist, 119 HARV. L. REV. 6,6 (2005) (“[O]f all the bosses I have had as a lawyer, law teacher, and judge, Chief Justice William Hobbs Rehnquist was hands down the fairest and most efficient.”); William N. La Forge, *Chief Justice William H. Rehnquist Remembered*, 52 FED. LAW., Oct.2005, at 26, 28 (“Chief Justice Rehnquist was known as a pragmatist in many respects, and, through artful compromise and fair-minded debate intended to achieve the broadest majority possible, he strove to lead the Court with a show of judicial unity, while also preserving the integrity and credibility of the Court and the law.”); Tony Mauro, *The Chief and Us: Chief Justice William Rehnquist, The News Media, and The Need For Dialog Between Judges and Journalists*, 56 SYRACUSE L. REV. 407, 407 (2006) (“He was a brilliant and modest jurist who loved the Supreme Court and loved history but did not, I am fairly sure, love the news media. . . . [H]e viewed [the media] as something of a distraction.”).

³ 530 U. S. 428 (2000) (Rehnquist, C. J., delivered the opinion of the Court, in which Stevens, O’Connor, Kennedy, Souter, Ginsburg, and Breyer, JJ., joined. Scalia, J., filed a dissenting opinion, in which Thomas, J., joined.).

⁴ See, e.g., Bradley, *supra* note 2; Cruz, *supra* note 2; Linda Greenhouse, *The Last Days of the Rehnquist Court: The Rewards of Patience and Power*, 45 ARIZ. L. REV. 251 (2003); Yale Kamisar, *Dickerson v. United States: The Case That Disappointed Miranda’s Critics—and Then Its Supporters*, in THE REHNQUIST LEGACY 106 (Craig Bradley ed., 2006).

⁵ Jeffrey Rosen, *Rehnquist the Great*, THE ATLANTIC MONTHLY, Apr. 2005, available at www.theatlantic.com/doc/200504/rosen. With respect to *Dickerson*, Professor Rosen notes: Rehnquist’s evolution from *Miranda*’s leading critic to its improbable savior infuriated conservatives and confused liberals; but in fact it was emblematic of his career. . . . [L]iberals have never understood how significantly and frequently Rehnquist departed from doctrinaire conservative ideology, and conservatives have failed to grasp that his tactical flexibility was more effective than the rigid purity of Scalia and Thomas. In truth, Rehnquist carefully staked out a limbo between the right and the left and showed that it was a very good place to be. . . . As for judicial temperament, he was far more devoted to preserving tradition and majority rule than the generation of fire-breathing conservatives who followed him. *Id.*

⁶ 384 U. S. 436 (1966).

⁷ See *infra* notes 102, 108 and accompanying text.

In the wake of the Chief Justice's ruling, legal scholars grappled to interpret this apparently anomalous decision. This process produced a litany of explanations.⁸ Some commentators pursued a separation of powers theory, positing that the Chief sought to protect the Court from encroachment by Congress.⁹ Some focused upon exogenous factors, arguing that public opinion motivated the Chief.¹⁰ Still others argued that the decision was strong evidence of Rehnquist's faithful adherence to the principle of *stare*

⁸ See *infra* notes 9, 10, 12. For a small sample of additional commentary, see also Paul G. Cassell, *The Paths not Taken: The Supreme Court's Failures in Dickerson*, 99 MICH. L. REV. 898 (2001); Richard H. Fallon, *Constitutional Law and the Supreme Court: Judicial Legitimacy and the Unwritten Constitution: A Comment on Miranda and Dickerson*, 45 N.Y.L. SCH. L. REV. 119 (2001); *The Supreme Court 1999 Term: The Leading Cases*, 114 HARV. L. REV. 179, 199-209 (2000); Conor G. Bateman, Note, *Dickerson v. United States: Dickerson is Deemed a Constitutional Rule, But Does it Really Matter?*, 55 ARK. L. REV. 177 (2002); Andrew W. Muller, Note, *Congress' Right to Remain Silent in Dickerson v. United States -or- How I Learned to Stop Worrying and Learn to Love Miranda v. Arizona*, 34 CREIGHTON L. REV. 801 (2001).

⁹ See George M. Drey, *The "Illegitimate Exercise of Raw Judicial Power:" The Supreme Court's Turf Battle in Dickerson v. United States*, 40 BRANDEIS L.J. 47, 80-81, 88 (2001) ("[T]he Court defended *Miranda* because, in attacking this decision, Congress was intruding upon the court's turf. . . . In short, 18 U.S.C. § 3501 struck a raw nerve; the Court felt the need to flex its judicial muscle in the face of what it perceived as a particularly well-targeted threat from a co-equal branch."); Arthur H. Garrison, *Rehnquist v. Scalia—The Dickerson and Miranda Cases: A Debate on What Makes a Decision Constitutional*, 25 AM. J. TRIAL ADVOC. 91, 133 (2001); Craig M. Bradley, *Behind the Dickerson Decision*, 36 TRIAL 80 (Oct. 2000). Professor Bradley advances two explanatory theories, the second of which argues that the separation of powers motivated the Chief. Specifically, he notes, "[T]his was likely because of the second reason Rehnquist's vote did not surprise me: his concern with maintaining the balance of power between the Court and Congress." *Id.* at 80.

¹⁰ Greenhouse, *supra* note 4, at 253 n.17 (citing KENNETH W. STARR, *FIRST AMONG EQUALS: THE SUPREME COURT IN AMERICAN LIFE* 207 (2002) (arguing that the majority in *Dickerson* was unwilling to endure the public criticism which would follow from overruling *Miranda*)); Bradley, *supra* note 9, at 80 (describing how William Rehnquist admired former Chief Justice Charles Evans Hughes because "Hughes believed that unanimity of decision contributed to public confidence in the Court." (citing William Rehnquist, *Chief Justices I Never Knew*, 3 HASTINGS CONST. L.Q. 637 (1976))); Mitch Reid, Note, *United States v. Dickerson: Uncovering Miranda's Once Hidden and Esoteric Constitutionality*, 38 HOUS. L. REV. 1343, 1378-9 (2001) ("The simplest answer is that to hold otherwise the Court would have overturned a simple, yet comforting legal procedure embraced by most Americans. . . . Considering *Miranda*'s popularity, imagine the enormity of public backlash the Court would have received if it overturned such a distinguished decision.") All of these arguments are bolstered by language contained within the opinion specifically noting that public opinion at least partially motivated the court. In particular, Justice Rehnquist wrote that public acceptance of *Miranda* has led it to become part of the "national culture." *Dickerson*, 530 U. S. 428, 443 (2000).

decisis.¹¹ The *Dickerson* opinion itself particularly supports this latter account. Chief Justice Rehnquist specifically noted, “[W]hether or not we would agree with *Miranda*’s reasoning and its resulting rule, were we addressing the issue in the first instance, the principles of *stare decisis* weigh heavily against overruling it now.”¹²

As written, many accounts accept the opinion at face value, thereby disavowing the potential of a strategic explanation. The difficulty with the non-strategic accounts is their failure to outline explicitly the evidence supporting the uniqueness of their theory.¹³ Specifically, these explanations largely ignore the alternative set of preferences which could have produced the Chief’s decision. This is troubling because prior scholarship demonstrates that a chief justice possesses a unique set of institutional powers which provides significant incentive for him to behave sophisticatedly.¹⁴ Many prevailing

¹¹ See Stephanos Bibas, *The Rehnquist Court’s Fifth Amendment Incrementalism*, 74 GEO. WASH. L. REV. (forthcoming 2006), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=830724 (December 12, 2006) (“Out of respect for *stare decisis*, the Court left in place *Miranda*’s warnings but restricted its exclusionary rule and largely declined to extend *Miranda*.”); Rosen, *supra* note 5 and accompanying text; Bradley, *supra* note 2, at 56-57). *Contra* William S. Consovoy, *The Rehnquist Court and the End of Constitutional Stare Decisis: Casey, Dickerson and the Consequences of Pragmatic Adjudication*, 2002 UTAH L.J. 53, 93-95; Kevin McNamee, Comment, *Do As I Say and Not As I Do: Dickerson, Constitutional Common Law and the Imperial Supreme Court*, 28 FORDHAM URB. L.J. 1239, 1293 (2001).

¹² *Dickerson*, 530 U.S. at 443.

¹³ However, there are a few works which reflect an exception to this trend. See Cruz, *supra* note 2 at 13-15; see also Donald A. Dripps, *Constitutional Theory for Criminal Procedure: Dickerson, Miranda, and the Continuing Quest for Broad-but-Shallow*, 43 WM. & MARY L. REV. 1(2001); Yale Kamisar, *From Miranda to § 3501 to Dickerson to . . .*, 99 MICH. L. REV. 879 (2001); Kamisar, *supra* note 4; Susan R. Klein, *Identifying and (Re)Formulating Prophylactic Rules, Safe Harbors, and Incidental Rights in Constitutional Criminal Procedure*, 99 MICH. L. REV. 1030, 1032-33 (2001); Jeffery Standen, *Symposium: Policy at the Intersection of Law and Politics: Panel One: The Politics of Miranda*, 12 CORNELL J.L. & PUB. POL’Y 555, 564 (2003).

¹⁴ Many books and articles either explicitly or implicitly advance this argument. See LEE EPSTEIN & JACK KNIGHT, *THE CHOICES JUSTICES MAKE* (1997); WALTER F. MURPHY, *ELEMENTS OF JUDICIAL STRATEGY* (1964); SUPREME COURT DECISION-MAKING: NEW INSTITUTIONALIST APPROACHES (Cornell W. Clayton & Howard Gillman eds., 1999); G. Edward White, *The Internal Powers of the Chief Justice: The Nineteenth Century Legacy* (Mar. 2006), University of Virginia Public Law and Legal Theory Working Paper Series, Working Paper 42, available at http://law.bepress.com/uvalwps/uva_publiclaw/art42/. Unlike his predecessors, some have argued that Chief Justice Rehnquist did not use his administrative authority to

explanations for *Dickerson* at a minimum are incomplete because they fail to determine whether his vote and opinion were the result of moderation, fidelity to traditional legal principles, or, in fact, strategic behavior.

This article pursues its own uniqueness claim, arguing the gravamen of available evidence supports a strategic explanation for Justice Rehnquist's behavior in *Dickerson*. To do this, the article first reviews the methodological debate which exists within the social science scholarship, a debate relevant to the competing explanations for the *Dickerson* decision. Next, the article explores the strategic or quasi-game theoretic approach by describing the multistage sophisticated process which produces all Supreme Court decisions. It culminates in Figure 2.1, a general diagram that is carried forward into Part II of the article.

Part II directly considers the *Dickerson* decision. This section begins with a description of the Supreme Court's *Miranda* jurisprudence before reviewing the specific facts and procedural history of the case. Next, Part II reviews Justice Rehnquist's *Miranda*-related decisions which, taken together, demonstrate the truly anomalous nature of the *Dickerson* opinion. The article then outlines its strategic account, an approach rejecting many prevailing explanations of Rehnquist's behavior.

obtain strategic advantage. This article argues against this view with respect to the discrete case of *Dickerson v. United States*. For a greater discussion of potentially strategic behavior of the late Rehnquist Court, see Linda Greenhouse, *Forward: The Third Rehnquist Court*, in THE REHNQUIST LEGACY, *supra* note 4, at xiii. Greenhouse, a prominent reporter for The New York Times, notes that in several major cases of the late Rehnquist Court such as *Nevada v. Hibbs*, 538 U.S. 721 (2003), and *Locke v. Davey*, 540 U.S. 712 (2004), the Chief voted with large majorities and crafted opinions which were "cryptic" and "not long on legal analysis." *Id.* at xviii. She argues that the Chief choose to engage a "sacrifice of cogency" to further greater institutional and societal interests. Yet, although *Dickerson* is "not long on legal analysis," Greenhouse's claim is inconsistent with the account provided herein as this article contends that institutional and societal interests did not animate Chief Justice Rehnquist's decision in *Dickerson*.

Strategic and non-strategic behaviors are often observationally equivalent. Thus, in order firmly to support its strategic theory, this article concludes with a discussion of several important post-*Dickerson* decisions including *Chavez v. Martinez*,¹⁵ *Missouri v. Seibert*,¹⁶ and *United States v. Patane*,¹⁷ where the Chief Justice to the surprise of some supports the preservation of certain exceptions to *Miranda* even after his *Dickerson* opinion supposedly afforded *Miranda* full constitutional status. The cases are critical to the analysis because they help determine what end Chief Justice Rehnquist actually achieved in his *Dickerson* opinion. He successfully froze a set of pre-*Dickerson* *Miranda* exceptions which he personally developed during his thirty-year tenure on the Court. It is from this perspective that commentators in fact are correct to argue that *Dickerson* is critical to understanding the legacy of the late Chief Justice.¹⁸

PART I: TOWARD A MODEL OF SUPREME COURT DECISION-MAKING ACROSS THE GREAT METHODOLOGICAL DIVIDE

Like many other subfields in the social sciences, the public law scholarship divides scholars into several methodological camps. Although theories of judicial decision-making have been the subject of numerous articles, edited volumes, and books, the methods employed to substantiate these theories are quite varied. Generally the

¹⁵ 538 U. S. 760, 767 (2003) (explaining that until unwarned statements are introduced at trial, there is no constitutional violation).

¹⁶ 542 U. S. 600, 622 (2004) (O'Connor, J., dissenting) (noting that *Elstad* standard should control to analyze whether taint of initial unwarned statement is vitiated by second warned statement).

¹⁷ 542 U. S. 630, 637 (2004) (noting that physical evidence located based on unwarned statements is admissible unless statements actually coerced).

¹⁸ See *supra* note 5 and accompanying text. Professor Rosen, citing *Dickerson*, argues the Chief Justice is misunderstood by both liberal and conservative commentators. Specifically, he notes how Rehnquist, unlike his more conservative counterparts on the Court, often departed from “doctrinaire conservative ideology.” While Rosen’s thesis may or may not be true, this article will show why Justice Rehnquist’s behavior in *Dickerson* simply fails to substantiate his proposition that a reconsideration of Rehnquist jurisprudence is warranted. See Rosen *supra* note 4 and accompanying text.

scholarship finds individuals subscribing to one of three major approaches: the legal model,¹⁹ the behaviorist attitudinal model,²⁰ or some variant of the strategic model.²¹

The legal model is the traditional means to consider judicial outcomes. Typically advanced by certain members of the legal academic community, it is a normative case-based approach, which argues that judicial outputs should be the byproduct of a deliberate application of legal principles that are neutral as to the identity of the parties.²² The model both argues that justices view themselves as significantly constrained by precedent and that political considerations are largely antithetical to the jurisprudential decision-making process.

Proponents of Legal Realism,²³ one of the historically important perspectives set forth by the legal academy, argue that in fact judicial decision-making is often animated

¹⁹ JEFFREY A. SEGAL & HAROLD J. SPAETH, *THE SUPREME COURT AND THE ATTITUDINAL MODEL* (1993).

²⁰ *Id.*

²¹ *E.g.*, EPSTEIN & KNIGHT, *supra* note 14; SUPREME COURT DECISION-MAKING: NEW INSTITUTIONALIST APPROACHES, *supra* note 14.

²² For one description of the legal model, see SEGAL & SPAETH, *supra* note 19, at 33-64. The legal model as described by Segal & Spaeth is very much akin to formalist models of judicial decision-making offered by the legal process scholars. For prominent work from the Legal Process School, see generally ALEXANDER BICKEL, *THE LEAST DANGEROUS BRANCH: THE SUPREME COURT AT THE BAR OF POLITICS* (1962); HENRY M. HART & ALBERT SACKS, *THE LEGAL PROCESS* (William Eskridge, Jr. ed., 1994); Lon Fuller, *The Forms and Limits of Adjudication*, 92 HARV. L. REV. 353 (1978); Herbert Weschler, *Toward a Neutral Principal of Constitutional Law*, 73 HARV. L. REV. 1 (1959). For other non-formalist strands of the legal model, see RONALD DWORKIN, *LAW'S EMPIRE* (1986); KEITH E. WHITTINGTON, *CONSTITUTIONAL INTERPRETATION: TEXTUAL MEANING, ORIGINAL INTENT, AND JUDICIAL REVIEW* (1999).

²³ Brian Leiter, *American Legal Realism*, in *THE BLACKWELL GUIDE TO PHILOSOPHY OF LAW AND LEGAL THEORY* 50, 50-66 (W. Edmunson, et al. eds., 2003). Legal realists responded to the formalism which once attached to the explanation of judicial decision-making. Formalists posited “that judges decide cases on the basis of distinctively legal rules and reasons, which justify a unique result in most cases (perhaps every case).” *Id.* at 50. Realists countered arguing that the law was indeterminate and thus other non-doctrinal considerations actually animated judicial decision-making. There are several major sub-sets of realist scholars. However, those most common identified with realism include Karl Llewellyn, Max Radin, Jerome Frank, Herman Oliphant and Joseph Hutcheson. Some contend that legal realism is a discredited legal theory. See H.L.A. HART, *THE CONCEPT OF LAW* 124-54 (2d ed. 1994). Others contend that realism

by non-doctrinal considerations. Realists do not deny the relevance of the legal model for many cases, but can be distinguished from other scholars in the extent to which they believe extra-legal considerations animate judicial behavior.²⁴ Therefore, for many, the approaches favored by social scientists and those favored by legal academics have to some extent converged. Therefore, the question is no longer whether “law matters” but rather the extent to which it matters. It is a question of degree. Those who subscribe to most current conceptions of the legal model view the law as important but also recognize the political outlook of the actors as an additional driving force.

As their name implies, behavioralists focus upon the objective behavior that typically manifests itself in the votes taken by judicial actors. In complete contrast to the legal model, Professors Segal and Spaeth, the primary proponents of the behavioral approach, posit judicial conduct can best be understood through their attitudinal model, an approach that argues justices cast votes to maximize their individual policy preferences.²⁵ Therefore, “Rehnquist votes the way he does because he is conservative

persists as a cogent theory of the law. See Michael S. Green, *Legal Realism as a Theory of Law*, 46 WM. & MARY L. REV. 1917 (2005).

²⁴ Richard A. Brisben, *Slaying the Dragon: Segal, Spaeth and the Function of the Law in Supreme Court Decision Making*, 40 AM. J. POL. SCI. 1004, 1007 (1996) (“[U]sing jurisprudential reasoning, much of the academic legal community has abandoned the political assumptions of Old Legal Process scholarship....”).

²⁵ In some sense, there is significant overlap between Segal and Spaeth, and Critical Legal Studies (CLS) theorists in so much as both view policy preferences or ideology as the exclusive motivation of judicial actors. CLS theorists expand upon the work of legal realists arguing that realist scholars vastly understate the degree of indeterminacy in the law. In other words, “[B]eneath the patina of legalistic jargon, law and judicial decision-making are neither separate nor separable from disputes about the kind of world we want to live in.” Alan C. Hutchinson, *Introduction to CRITICAL LEGAL STUDIES 4* (Alan C. Hutchinson ed., 1989). However, most directly, CLS emphasizes the connection between ideology and judicial outputs. CLS theorists believe that the logic of the law grows out of asymmetric power relationships. Thus, legal decision-making biases already favored groups. For a concise description of the argument of first order CLS scholars, see generally RICHARD W. BAUMAN, *IDEOLOGY AND COMMUNITY IN THE FIRST WAVE OF CRITICAL LEGAL STUDIES* (2002). For a discussion of the distinctions between realism and CLS, see Debra Livingston, *Round and Round the Bramble Bush: From Legal Realism to Critical Legal Studies*, 95 HARV.

while Marshall votes the way he does because he is extremely liberal.”²⁶ Attitudinalists view justices as decision makers who always vote their unconstrained attitudes.²⁷ Their outlook is methodologically attractive because it allows scholars to narrow their focus to the objective votes of the respective justices. Therefore, attitudinalists are able empirically to test their behavioral theories by studying publicly available voting records.

Attitudinalists have made significant contributions to the public law scholarship. In particular, they have succeeded in convincing many that policy preferences do indeed matter. Despite its contribution to the debate, the attitudinal model suffers from significant criticism.²⁸ While some of these demurrers lack an alternative hypothesis, the most sophisticated critique comes from those who seek to understand the strategic context through which justices maximize their individual policy preferences. Namely, as a follow-on to the wave of neo-institutional theories which have come to pervade the social sciences,²⁹ many judicial scholars recently have sought to better understand how

L. REV. 1669 (1982); Jeffery Standen, *Critical Legal Studies as an Anti-Positivist Phenomenon*, 72 VA. L. REV. (1986).

²⁶ SEGAL & SPAETH, *supra* note 19, at 65.

²⁷ *Id.*

²⁸ For a small sample of critiques of the attitudinal model, see e.g., LAWRENCE BAUM, *THE PUZZLE OF JUDICIAL BEHAVIOR* (1997); Howard Gillman & Cornell W. Clayton, *Beyond Judicial Attitudes: Institutional Approaches to Supreme Court Decision-Making*, in *SUPREME COURT DECISION-MAKING: NEW INSTITUTIONALIST APPROACHES*, *supra* note 14; FORREST MALTZMAN, ET.AL., *CRAFTING LAW ON THE SUPREME COURT: THE COLLEGIAL GAME*; Brisben, *supra* note 24.

²⁹ The “New-Institutionalism” as contemplated within the rational choice wing of political science builds upon the institutional economic work of Nobelist Douglass North. See, e.g., DOUGLASS C. NORTH, *INSTITUTIONS, INSTITUTIONAL CHANGE, AND ECONOMIC PERFORMANCE* vii (1990); Douglass C. North, *Institutions*, 5 J. ECON. PERSP. 97 (1991); Douglass C. North, *A Transaction Cost Theory of Politics*, 2 J. THEORETICAL POL. 355 (1990). For examples of other prominent work, see Daniel Diermeier & Keith Krehbiel, *Institutionalism as a Methodology*, 15 J. THEORETICAL POL. 123 (2003); James March & Johan Olsen, *Institutional Perspectives on Political Institutions*, 9 GOVERNANCE 247 (1996); James March & Johan Olsen, *The New Institutionalism: Organizational Factors in Political Life*, 78 AM. POL. SCI. REV.

institutional rules and norms channel the decision-making process within the judicial branch.³⁰

Specifically, although a justice may desire to vote in a liberal or conservative manner, there may be legal or institutional restraints which incentivize a contrary vote. Institutional scholars do not reject a neo-classical maximization framework, but instead argue the notion of policy preference maximization cannot truly be understood without reference to the institutional context in which judicial actors find themselves.

The foundation for the neo-institutionalist approach began with a focus upon the strategic stages of the jurisprudential decision-making process. For while decisions on the merits may reflect the Court's official outputs, these final votes derive from several earlier stages, each of which produces the possibility for strategic behavior. *Elements of Judicial Strategy*, the classic book by Walter Murphy, was the first text to pursue a contextual approach, arguing that justices act within strategic settings where they must behave sophisticatedly if they wish to implement their specific policy preferences.³¹

Epstein and Knight updated and expanded Murphy's account by specifically considering each of the various stages of Supreme Court decision-making.³² They focus tremendous attention upon the institutional rules and norms which help inform decision-making and argue that because each stage creates the potential for strategic behavior,

734 (1984); Oliver E. Williamson, *The New Institutional Economics: The Institutions of Governance*, 88 AM. ECON. REV. 75 (1998).

³⁰ See *supra* note 14.

³¹ MURPHY, *supra* note 14, at 202.

³² EPSTEIN & KNIGHT, *supra* note 14.

public law requires a methodological approach which shifts “the focus away from discrete acts of simple vote counting”³³ toward a more fully informed account of the institutional incentives which ultimately produce *The Choices Justices Make*.³⁴

This article follows their approach as it attempts to explain Justice Rehnquist’s otherwise anomalous behavior in *Dickerson*. However, before specifically turning to *Dickerson*, the article briefly outlines the strategic nature of various Supreme Court decision-making stages including certiorari, conference proceedings, opinion assignments, and post assignment coalition maintenance.

Stage 1: The Certiorari Decision

The United States Supreme Court enjoys a unique position within the federal judicial system. Not only does it sit atop a structural hierarchy, but it also enjoys almost complete control over its agenda. While a limited number of cases reach this Court through either original³⁵ or statutory jurisdiction,³⁶ the vast majority of litigants must file

³³ Gillman & Clayton *supra* note 28.

³⁴ EPSTEIN & KNIGHT, *supra* note 14. For other examples of work adopting some variant of the strategic approach see BAUM, *supra* note 28, at 123; MALTZMAN, *supra* note 28, at 4-5; and Paul Brace & Melinda Gann Hall, *Neo-Institutionalism and Dissent in State Supreme Courts*, 52 J. POL. 54, 66 (1990) (describing a strategic view of State Supreme Court decision-making).

³⁵ “In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be a Party, the Supreme Court shall have original Jurisdiction.” U.S. CONST. art. III, § 2, cl. 2.

³⁶ *E.g.*, 28 U.S.C. §§ 1254, 1257, 2350 (2000); RUSSELL R. WHEELER & CYNTHIA HARRISON, CREATING THE FEDERAL JUDICIAL SYSTEM 18 (3d ed. 2005). Wheeler and Harrison note that:

[d]espite the relatively modest changes in circuit structure, the federal courts today differ strikingly from their forerunners in 1891, and even more from those of 1789. The Supreme Court’s limited certiorari jurisdiction in the 1891 Act has been broadened by successive legislation, the most noteworthy being the Judiciary Act of 1925, and the most recent being a 1988 act that eliminated most remaining categories of the Court’s mandatory appellate jurisdiction.

Id. at 24. The 1925 Judiciary Act, passed at the urging of Chief Justice and former President William Howard Taft, is often described as part of a larger movement towards judicial autonomy which occurred

a petition for a writ of certiorari to seek Supreme Court review. The Court has complete authority to reject these petitions³⁷ and does so in all but a small number of cases.³⁸

The specific mechanism which determines the status of a particular petition is a sub-majoritarian collective choice rule commonly referred to as “the rule of four.”³⁹ The rule is not actually a rule. Rather, it is an internal norm of the institution.⁴⁰ This norm typically is observed by its members but not required by the United States Constitution, a federal statute, or the Supreme Court’s own published rules.⁴¹ Its historical origins are

during the 1920s. Taft’s entrepreneurialism was critical in the crafting of the modern judiciary as he is responsible not only for increasing the permissive jurisdiction of the Supreme Court but also for reorganizing and bureaucratizing the federal judiciary. For a detailed description, see Justin Crowe, *The Forging of Judicial Autonomy: Political Entrepreneurship and the Reforms of William Howard Taft*, 69 J. POL. ___ (forthcoming 2007) (manuscript on file with author).

³⁷ SUP. CT. R. 10. Supreme Court Rule 10 states a “petition for certiorari will be granted only for compelling reasons.” The stated reasons include but are in no way limited to a conflict among the United States Courts of Appeal, a conflict between a state court of last resort and another state or federal court or a state or Federal court decision which deviates from “relevant decisions” of the United States Supreme Court. *Id.*

³⁸ “In the 1995 term, for example, the Court granted certiorari to 92 of 2456 paid certiorari petitions (4 percent) and to 13 of 5,098 pauperis petitions (0.3 percent).” Saul Brenner, *Granting Certiorari by the United States Supreme Court: An Overview of the Social Science Studies*, 92 LAW LIBR. J. 193,195 (2000) (citing LEE EPSTEIN ET AL., *THE SUPREME COURT COMPENDIUM: DATA, DECISIONS & DEVELOPMENTS*, 83 tbl. 2-6 (2d ed. 1996). In sum, for the 1995 term, the Court granted certiorari in 105 of 7554 petitions (1.3 percent). In more recent years, the probabilities are even less favorable to a would-be litigant. *Id.*

³⁹ While the “rule of four” dictates the decision with regard to certiorari, the justices, with the aid of their clerks use an additional gate keeping mechanism to ferret out meritorious petitions. Initially, a case must reach the “discuss list,” a tally of cases which are openly considered during the justices internal conference. Each case not placed upon the discuss list is automatically denied certiorari. See Gregory Caldeira & John Wright, *The Discuss List: Agenda Building in the Supreme Court*, 24 L. & SOC’Y REV. 807, 808 (1990). With the exception of Justice Stevens, each of the members of the court participates in the “cert pool” whereby the eight participating Justices pool their respective law clerks to produce recommendation memoranda regarding each petition for certiorari. While the Justices are of course free to vote as they wish, they often follow their clerks’ advice. See Saul Brenner & Jan Palmer, *The Law Clerk’s Recommendations and Chief Justice Vinson’s Vote on Certiorari*, 18 AM. POL. Q. 68, 70-71 (1990).

⁴⁰ The origin of the rule of four is somewhat unclear. “What evidence there is suggests strongly that the rule was developed by the Court itself, and that it probably came into existence about the time the Court first received discretionary authority, that is, shortly following the Court of Appeals Act of 1891.” Joan Maisel Leiman, *The Rule of Four*, 57 COLUM. L. REV. 975, 981 (1957).

⁴¹ In fact, Justice Stevens discusses the interrelationship between the doctrine of *stare decisis* and the rule of four. He suggests that various changes to the Court’s jurisdiction and practices make the rule of four

somewhat clouded, yet its existence was acknowledged by various Justices who testified before Congress in the early 1920s.⁴²

As the name implies, the rule requires the votes of at least four of the nine justices to grant a petition for certiorari. The sub-majoritarian nature of the collective choice rule is juxtaposed against the final decision on the merits, where a majority of justices, typically five or greater, must lend support to a position before it can carry precedential value. This discontinuity between the stage decision and the final decision helps define the strategic context that surrounds the certiorari vote.

To be specific, a justice must cast a vote for or against certiorari without perfect knowledge of how others will vote once the case is actually decided on the merits. Because the exact positions of the fellow justices cannot be perfectly obtained, a justice seeking to maximize his or her policy preferences at the final stage cannot be assured at the certiorari stage that a favorable vote will produce a favorable outcome. Therefore, the decision can be best described as a choice under uncertainty in which a justice, seeking to maximize his or her policy preferences, yet unsure of how colleagues ultimately might decide the case, could find it preferable to maintain the lower court decision rather than risk an adverse High Court, i.e., a ruling ideologically distant from that justice's ideal point.⁴³

less necessary and or desirable than it once was, and, also, more susceptible to change. John Paul Stevens, *The Life Span of a Judge Made Rule*, 58 N.Y.U. L. REV. 1, 18-21 (1983).

⁴² *Id.* at 10.

⁴³ H. W. PERRY, *DECIDING TO DECIDE: AGENDA SETTING IN THE UNITED STATES SUPREME COURT* (1991); GLENDON A. SCHUBERT, *QUANTITATIVE ANALYSIS OF JUDICIAL BEHAVIOR* (1959); Robert Boucher &

Underlying motivation is difficult to ascribe to the certiorari votes of individual justices in individual cases because the comparison between the final votes on the merits and votes on certiorari may not necessarily provide insight into individual motivation.⁴⁴ For example, one justice may vote to grant certiorari to reverse the decision of a lower court;⁴⁵ another might vote to grant certiorari in order to nationalize the ruling below.⁴⁶ Also, since strategic interaction colors decisions at numerous stages, including the conference proceeding, opinion assignment, and post-assignment bargaining, each justice must consider how other justices are likely to behave, not only with respect to their final vote, but throughout the decision process. This realization complicates analysis of voting patterns at each stage because justices must make discrete decisions at various stages which ultimately lead to a final outcome. Nevertheless, it is not a world of complete indeterminacy because institutional rules and norms help to channel choices by providing certain justices with micro incentives at various stages of the judicial decision-making process.

Stages 2, 3, and 4: Conference Proceedings, Tentative Votes, and Opinion Assignments

The certiorari stage is only the threshold stage of Supreme Court litigation. The next major stage is the conference which typically follows oral argument. Justices gather privately to discuss the cases from the most recent court session. Like other points in the

Jeffery Segal, *Supreme Court Justices as Strategic Decision Makers: Offensive Grants and Defensive Denials on the Vinson Court*, 57 J. POL. 824 (1995).

⁴⁴ However, some argue such comparisons are fruitful. See, e.g., John F. Krol & Saul Brenner, *Strategies in Certiorari Voting on the United States Supreme Court: A Reevaluation*, 43 W. POL. Q. 335 (1990); Jan Palmer, *An Economic Analysis of the U. S. Supreme Court's Certiorari Decisions*, 39 PUB. CHOICE 387 (1982).

⁴⁵ Brenner, *supra* note 38, at 195-197.

⁴⁶ *Id.* at 201.

process, there are a series of social norms which accompany this gathering. One convention allows the chief justice to speak and vote first followed by each associate justice in order of seniority.⁴⁷ In recent years, an additional norm allows each justice to speak once before acquiring a second opportunity to comment. Prior to these opening statements, all face a degree of uncertainty regarding the preferences of their fellow justices. The conference proceedings reduce this uncertainty. In fact, as the initial discussions conclude with the opening statement of the most junior Associate Justice, the formerly uncertain landscape is far more certain.

The potential for revealed preferences frame the strategic interaction at this stage. For example, some argue there are significant incentives for certain justices to deviate from the tentative voting norm.⁴⁸ By strategically passing, a justice can maximize information prior to casting a tentative vote. The actor with the greatest incentive to engage in this behavior is the chief justice because he can garner the potential power of opinion assignment if he finds himself in the majority.⁴⁹ By voting last, the chief justice can ascertain the tentative ideological distribution of his fellow justices before casting his vote, thereby maximizing his probability of acting as an opinion assignor.

There is some empirical evidence of such behavior in the historical records of conference proceedings.⁵⁰ Chief Justice Burger, for example, is reputed to have strategically passed or changed his tentative vote in a number of politically salient

⁴⁷ WILLIAM H. REHNQUIST, *THE SUPREME COURT* 254 (new ed. 2001).

⁴⁸ Timothy R. Johnson, James F. Spriggs II & Paul J. Wahlbeck, *Passing and Strategic Voting on the U.S. Supreme Court*, 39 *LAW & SOCIETY REV.* 349 (2005).

⁴⁹ *Id.*; see also White, *supra* note 14.

⁵⁰ Johnson et al., *supra* note 48.

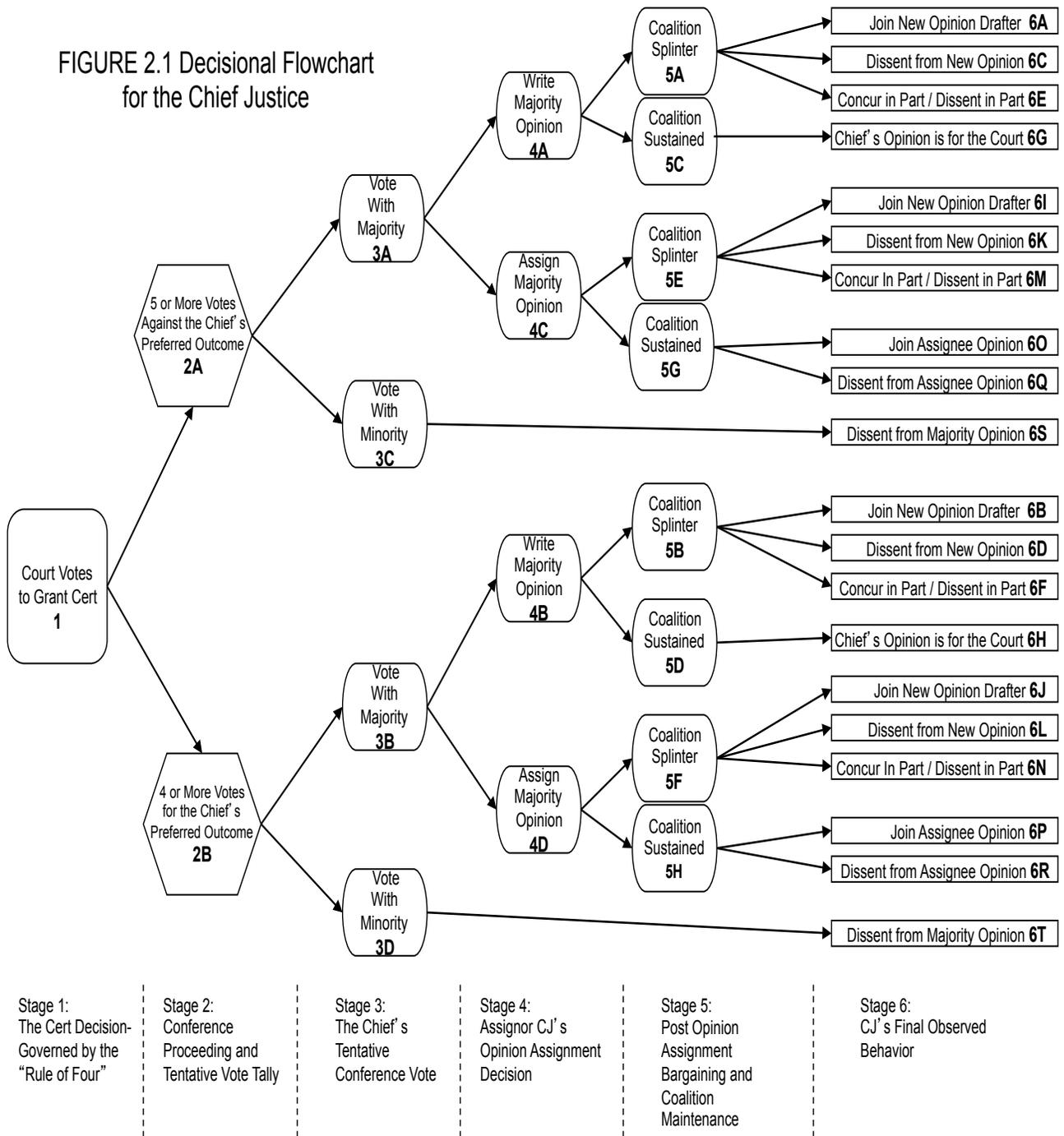
cases.⁵¹ In many instances, this behavior assured him a place with the majority, thereby securing to him the power of opinion assignment.

Much like certiorari votes, it is difficult to ascribe specific motivation to this passing decision as there can be both non-strategic and strategic motives underlying the observed behavior. However, with the referenced empirical support, the balance of the paper assumes a chief justice may always use his role as administrator of the conference either strategically to pass or change his vote to garner the power of opinion assignment.

Figure 2.1, below, is a flowchart that captures the various stages of decision-making which face the chief justice. It is not a formal game theoretic model with a specific equilibrium prediction, but instead is simply a graphical representation of internal Supreme Court proceedings which define the path to a final decision on the merits. For ease, the diagram excludes certain complications such as plurality groupings, i.e., instances where no coalition can secure a majority. This simple figure demonstrates that there are a number of combinations of “states of the world” and sub-decisions which can produce a final observed vote by the chief justice.

⁵¹ *Id.*

FIGURE 2.1 Decisional Flowchart for the Chief Justice



Conditioned on the notion that the Court has granted certiorari, the figure begins with two potential branches. These branches capture two different states of the world in which, as assumed above,⁵² the chief can observe prior to making his tentative voting decision. Together, Nodes 2A and 2B collapse the spectrum of potential vote distributions into two distinct branches. Bracketing the more complicated case of plurality, the conference vote can either produce four or more votes for a policy position which is in line with the chief's own preferred position, or it can yield five or more votes for a contrary position. In the former instance, the strategic chief need not be strategic. Rather, he can simply vote his true, unbounded policy preference within the conference and still preserve for himself the power of opinion assignment. In that vein, node 3D is included only for analytical clarity.⁵³ It should never occur since a chief has no reason to vote against his policy preference when that preference has majority support.

The more complex decision for a strategic chief justice is how best to maximize his given policy preferences in a context where his preferences are unaligned with the majority of the Court.⁵⁴ The Figure's upper branch reflects a state of the world where

⁵² See Johnson et al., *supra* note 48. At least in politically salient cases, the chief can ignore the norm which typically finds the chief casting the first tentative vote. Alternatively, he could also strategically modify his vote following the tentative voting by his fellow justices.

⁵³ It is a typical convention in decision trees and game theoretic models to outline all theoretically possible outcomes. This includes potential choices such as 3D, a choice which the actor has absolutely no incentive to adopt. Specifically, a chief who possesses four or more votes for his preferred outcome has no incentive to vote against his true preferences. Instead, he has every incentive to vote his true preferences as this will provide a majority for his preferred view and allow him to maintain agenda control over the matter.

⁵⁴ Theodore Arrington & Saul Brenner, *Strategic Voting for Damage Control on the Supreme Court*, 57 POL. RES. Q. 565 (2004). "At least nine different highly respected Supreme Court scholars assert that the Justices on the Court, whether they are likely opinion assigners or not, will sometimes vote insincerely at the conference vote and with the majority in order to pursue damage control." *Id.* at 565. The authors cite a number of recent papers presented at major conferences, as well as some books. For an example of such works, see DAVID O'BRIEN, STORM CENTER: THE SUPREME COURT IN AMERICAN POLITICS (5th ed. 2000).

five or more votes support a position disfavored by the chief justice. If he maintains his genuine position, the chief will find himself in the minority, where his position has little chance of realization due to the loss of agenda control over the matter.⁵⁵ Thus, a strategic chief justice must decide whether it would best serve his policy goals to vote faithfully or sophisticatedly.⁵⁶

As noted earlier, if the chief justice elects to vote with the majority, he has the power to select the author of the Court's opinion. Yet, this authority transfers to the most senior associate justice when the chief finds himself outside of the majority. When voting in the shadow of the rule for opinion assignment, a voter must consider a variety of factors including the salience of the case at issue, the ideological distance between the chief justice and the court majority, and the ideological distance between the chief and the senior associate justice likely to be in the majority.⁵⁷

However, regardless of whether the chief initially finds himself on the strategic path at node 4A or the non-strategic path at 4B, he still faces a decision with respect to whom to assign the task of drafting the opinion of the Court. The Court's internal norm empowers him to assign the opinion to himself or to another justice within the winning coalition. Principally, this decision could take a variety of forms. Yet, since writing an opinion is a timely enterprise, and each justice is resource-constrained, an assignor cannot

⁵⁵ See Arrington & Brenner, *supra* note 54.

⁵⁶ *Id.*

⁵⁷ For consideration of the calculus of opinion assignment, see Forrest Maltzman & Paul J. Wahlbeck, *May It Please the Chief? Opinion Assignments in the Rehnquist Court*, 40 AM. J. POL. SCI. 421, 425-26 (1996) (discussing some of the factors that affect case assignment).

elect to retain every opinion. The assignor chief therefore must choose to assign some subset of the cases over which he initially has agenda control.

The chief could employ either a strategic or non-strategic decision rule to guide this choice. For example, the assignor chief could randomly assign the opinion to a member of the winning coalition. Alternatively, the assignor could follow a parity rule, assigning the case to a coalition justice with the fewest number of outstanding assignments. A knowledge rule could also guide the assignment decision whereby the drafting task is delegated to a justice with particular expertise within the relevant subject domain. Such non-strategic notions almost certainly motivate some of the chief's assignment decisions.⁵⁸

Yet this decision, like all others on the path to the final decision on the merits, contains the conditions for strategic behavior. The scholarship argues that opinion assignment can follow a number of strategic paths. For example, a strategic assignor might choose to assign cases to "an ideologically moderate justice" in the unstable coalition as part of a co-option strategy.⁵⁹ Alternatively, the chief may choose to retain the case or assign the opinion to a justice closely aligned with his position in an effort to

⁵⁸ Forrest Maltzman & Paul J. Wahlbeck, *A Conditional Model of Opinion Assignment on the Supreme Court*, 57 POL. RES. Q. 551 (2004). Maltzman and Wahlbeck find that "[f]ar from single mindedly seeking ideological gains, the chief justice pursues multiple goals through his power of opinion assignment...." *Id.* at 36. Further, they find that "[a]s a Court term nears completion, the chief is less concerned with equity, expertise and ideology and more concerned with efficiency." *Id.*

⁵⁹ Maltzman & Wahlbeck, *supra* note 57, at 426.

yield a final opinion close to his ideal point.⁶⁰ The specific facts of the case as well as the nature of the coalition will ultimately frame the chief's choice at the assignment stage.

Stages 5&6: Post Opinion Assignment Bargaining and Final Observed Behavior

If the chief chooses to bear the cost of opinion writing, the strategic setting does not abate. Rather, either the chief or his assignee must focus attention upon maintaining agreement within the coalition. Thus, he or she must bargain with fellow coalition members regarding both the language and tone of the opinion.⁶¹ The need for relative consensus provides the drafter with only bounded authority over the substance of the majority opinion. The ideological distance between the author and remaining coalition members greatly influences the probability of coalition maintenance. Strife contains a downside risk for the opinion drafter because the quest to pull the decision toward his or her personal policy preference could result in the splinter of the coalition. Figure 2.1 contemplates a coalition splinter through Nodes 5A and 5B for the chief justice and 5E and 5F for the assignee.

If the coalition dissolves and a new drafter arises, a chief must make a calculated response. He may join the new opinion drafter at 6A or 6B, dissent from the new opinion at 6C and 6D, or file some sort of mixture of concurrence and dissent at 6E and 6F. Finally, because of incomplete information a chief may initially assign an opinion to a

⁶⁰ *Id.*

⁶¹ See James Spriggs et al., *Bargaining on the U.S. Supreme Court: Justices' Responses to Majority Opinion Drafts*, 61 J. POL. 485 (1999). The authors write that "once the opinion draft is circulated, 'the fur begins to fly.'" (quoting Tom Clark, *Internal Operation of the United States Supreme Court*, 43 JUDICATURE 45, 51 (1959)). See also PHILLIP COOPER, *BATTLES ON THE BENCH: CONFLICT INSIDE THE SUPREME COURT* (1995); Paul Wahlbeck et al., *Marshalling the Court: Bargaining and Accommodation on the United States Supreme Court*, 42 AM. J. POL. SCI. 294 (1998).

fellow coalition member who ultimately drafts an opinion with which the chief disagrees. Thus, in response to arriving at either 5G or 5H, the chief may reply with terminal actions 6O, 6Q or 6P, 6R respectively.

This brief review of Figure 2.1 demonstrates that the chief is a unique player in the judicial decision-making process. Although he has been called a “first among equals,” it is unclear whether this label is understated.⁶² Substantial institutional authority surrounds his position. The chief is the only player on the Supreme Court for whom the strategic path, i.e., the ability to vote with the majority at 3A despite his underlying disagreement, is always available.

The chief also possesses exclusive administrative authority over the proceedings as well as the conditional power of opinion assignment. In a world of complete information without costs, these institutional powers might be of limited import. However, because Supreme Court decision-making is one where actors must cast votes with limited information and where significant costs attach to alternative coalition formation, institutional rules matter and those rules clearly favor the chief.⁶³

⁶² See White, *supra* note 14.

⁶³ This agenda control account described herein is familiar to many political scientists. Congressional scholars, in particular, have long argued how institutional rules and norms provide agenda control. This agenda control favors certain actors and potentially distorts the outputs of the legislative branch. For but a small sample of this extensive literature, see GARY W. COX & MATHEW D. MCCUBBINS, *SETTING THE AGENDA: RESPONSIBLE PARTY GOVERNMENT IN THE U.S. HOUSE OF REPRESENTATIVES* (2005); Gary W. Cox & Mathew D. McCubbins, *Agenda Power in the U.S. House of Representatives, 1877 – 1986*, in *PARTY, PROCESS, AND POLITICAL CHANGE IN CONGRESS: NEW PERSPECTIVE ON THE HISTORY OF CONGRESS* 107 (David W. Brady & Mathew D. McCubbins eds., 2002); Gary W. Cox, *On the Effects of Legislative Rules*, 25 LEGIS. STUD. Q. 169 (2000); Kenneth A. Shepsle & Barry R. Weingast, *Structure-Induced Equilibrium and Legislative Choice*, 37 PUB. CHOICE 503 (1981); Kenneth Shepsle & Barry R. Weingast, *The Institutional Foundations of Committee Power*, 81 AM. POL. SCI. REV. 85 (1987); Susan

PART II: THE EVIDENCE FROM DICKERSON V. UNITED STATES

“You have the right to remain silent. If you give up that right, anything you say can and will be used against you in a court of law. You have the right to an attorney and to have an attorney present during questioning. If you cannot afford an attorney, one will be provided to you.”⁶⁴

Hardly an hour of a television police drama passes without the recital of these famous words, the warnings which have come to be identified with the Supreme Court’s 1966 decision in *Miranda v. Arizona*.⁶⁵ The *Miranda* decision remade the topography of confessional jurisprudence by requiring that all individuals subject to a custodial interrogation be apprised of both their Fifth Amendment protection against self-incrimination as well as their Sixth Amendment right to counsel. Chief Justice Earl Warren, speaking for the Court majority, crafted the relatively controversial bright-line rule requiring suppression of all custodial confessions obtained in the absence of the warnings—regardless of whether the confession was “coerced” or “involuntary” in the traditional pre-*Miranda* sense.

The *Miranda* decision expanded upon an existing regime called the voluntariness test, a criterion which required that all statements be voluntarily provided. The origins of

Webb Yackee, *Punctuating the Congressional Agenda: Strategic Scheduling by House and Senate Leaders*, 56 POL. RES. Q. 139 (2003).

⁶⁴ The opinion in *Miranda v. Arizona*, 384 U.S. 436 (1966), itself, does not specifically delineate any exact wording which the warnings must follow. Therefore, jurisdictions employ some variant of the warnings cited above. Chief Justice Warren’s opinion, however, does describe the required core components which a warning should include: the right to remain silent, *id.* at 467-68, that silence will not be used against an individual, *id.* at 468, that anything said can and will be used against the individual, *id.* at 469, the right to counsel, *id.* at 471, and the provision of counsel for indigent individuals, *id.* at 472).

⁶⁵ *Miranda*, 384 U.S. at 444.

that standard can be traced to English common law, as the courts of England typically rejected involuntary confessions on reliability grounds. The United States Supreme Court imported the voluntariness standard through the 1897 decision in *Bram v. United States*.⁶⁶ *Bram* and its progeny established that trial courts were charged with the responsibility of reviewing the totality of the circumstances surrounding a confession in order to ensure that the statement was voluntarily provided. This totality approach is rather amorphous and arguably provided little guidance to authorities regarding the boundaries of acceptable conduct. Therefore, even prior to the Court's decision in *Miranda*, law enforcement organizations such as the FBI provided similar warnings to those mandated in *Miranda* to ensure that statements would survive a voluntariness hearing.⁶⁷

Even today, the mere provision of the warnings does not absolve the police from a voluntariness challenge because *Miranda* did not replace the voluntariness requirement; it only acted as an additional layer of protection. Thus, voluntariness continues to be a required component of the constitutional analysis and a reviewing court still can deem a custodial environment excessively coercive even if the *Miranda* warnings preceded a custodial confession.⁶⁸

⁶⁶ *Bram v. United States*, 168 U.S. 532 (1897).

⁶⁷ See YALE KAMISAR ET AL., MODERN CRIMINAL PROCEDURE 552-58 (11th ed. 2005). For a more general discussion see Yale Kamisar, *What Is an "Involuntary" Confession? Some Comments on Inbau and Reid's Criminal Interrogation and Confessions*, 17 RUTGERS L. REV. 728 (1963).

⁶⁸ For a brief description see KAMISAR ET AL., *supra* note 67, at 715. See also, e.g., *United States v. Ricardo D.*, 912 F.2d 337, 343 (9th Cir. 1990) (concluding that despite *Miranda* warnings, juvenile's in custodial confession was suppressed due to the coercive nature of an illegal arrest); *In Re Andre M.*, 88

The *Miranda* decision created substantial unrest and confusion which its opponents, most notably William Rehnquist, exploited.⁶⁹ Chief Justice Warren’s opinion contained a series of seemingly contradictory statements, that when viewed in isolation, undercut the basis for the Court’s holding.⁷⁰ Namely, it did not delineate whether the warnings were constitutionally mandated or instead were merely a sub-constitutional, common law requirement. Chief Justice Warren noted that “[o]ur decision in no way creates a constitutional straitjacket” and “we cannot say that the Constitution necessarily requires adherence to any particular solution.”⁷¹ Furthermore, the Court appeared to invite Congress and the states to craft alternative mechanisms.⁷² Taken together, this language favored the notion that *Miranda* was a common law holding since Congress and state governments are not empowered to craft constitutional standards through statutes. Yet, the Court provided an important caveat which frustrated any common law interpretation. Chief Justice Warren noted, “However, unless we are shown other procedures which are at least as effective in apprising accused persons of their right of silence and in assuring a continuous opportunity to exercise it, the following safeguards must be observed.”⁷³

P.3d 552 (Ariz. 2004) (finding juvenile’s waiver of right to remain silent after *Miranda* warnings insufficient to overcome coercive atmosphere where mother was excluded from interrogation).

⁶⁹ See KAMISAR, *supra* note 4, at 114-19.

⁷⁰ *Id.* Professor Kamisar describes how Justice Rehnquist’s opinion in *Michigan v. Tucker*, 417 U.S. 433 (1974), took language in the *Miranda* opinion out of context, thereby vectoring the future of the doctrine far away from Chief Justice Warren’s original opinion.

⁷¹ *Miranda*, 384 U.S. at 467.

⁷² *Id.*

⁷³ *Id.* For a more complete discussion, see KAMISAR, *supra* note 4, at 114-19.

Congress purported to follow the Court's invitation and crafted a standard designed to quell the substantial public outcry which followed the *Miranda* decision. Through the 1968 Omnibus Crime Control and Safe Streets Act,⁷⁴ Congress adopted a standard for evaluating custodial interrogations that was nearly identical to the prior voluntariness analysis.⁷⁵ Such an obvious rebuke to the *Miranda* decision promised that final resolution of *Miranda*'s constitutional status would soon obtain. However, its ultimate interpretation was stymied as every subsequent President and respective Attorney General refused to implement § 3501.⁷⁶ For more than thirty years, the constitutionality of the statutory provision and thus *Miranda* remained in flux.

Groundwork for the ultimate resolution of the question began in *Davis v. United States*,⁷⁷ where Justice Scalia noted that the Court finally should visit the constitutionality

⁷⁴ Omnibus Crime Control and Safe Streets Act of 1968, Pub. L. No. 90-351, § 701(a), 82 Stat. 197, 210 (codified as amended at 18 U.S.C. § 3501 (2000)).

⁷⁵ § 3501 provides, in part, as follows:

(a) [A] confession . . . shall be admissible . . . if it is voluntarily given. Before such confession is received in evidence, the trial judge shall, out of the presence of the jury, determine any issue as to voluntariness. If the trial judge determines that the confession was voluntarily made it shall be admitted in evidence and the trial judge shall permit the jury to hear relevant evidence on the issue of voluntariness and shall instruct the jury to give such weight to the confession as the jury feels it deserves under all the circumstances.

(b) The trial judge in determining the issue of voluntariness shall take into consideration all the circumstances surrounding the giving of the confession, including (1) the time elapsing between arrest and arraignment . . . , (2) whether such defendant knew the nature of the offense with which he was charged or of which he was suspected at the time of making the confession, (3) whether or not such defendant was advised or knew that he was not required to make any statement and that any such statement could be used against him, (4) whether or not such defendant had been advised prior to questioning of his right to the assistance of counsel; and (5) whether or not such defendant was without the assistance of counsel when questioned and when giving such confession.

Id.

⁷⁶ *Davis v. United States*, 512 U.S. 452, 463-64 (1994) (Scalia, J., concurring) (“[W]ith limited exceptions the provision has been studiously avoided by every Administration, not only in this Court but in the lower courts, since its enactment more than 25 years ago.”).

⁷⁷ *Id.* at 462-65.

of § 3501.⁷⁸ Soon thereafter, the Court of Appeals for the Fourth Circuit followed Justice Scalia's suggestion.⁷⁹ The stage was ready for the ultimate review of the question by the nation's highest court.

The Facts and Procedural History of Dickerson v. United States

January 24, 1997 began like any other day at the First Virginia Bank. Tellers filled their drawers while the branch manager oversaw the start of business. Customers entered the premises and conducted a variety of transactions including deposits, withdrawals, and check cashing. The normality of the day, however, vanished when an individual brandishing a semi-automatic handgun entered the bank and demanded money. The tellers quickly complied while bank customers and other employees waited fearfully. The suspect collected the proceeds and quickly fled.⁸⁰

Officers arrived and diligently secured the scene. Their investigation immediately produced a witness who saw the suspect leave the bank. He described the suspect and provided police with a license plate number from the gateway car.⁸¹ The plate matched a white Oldsmobile registered to Charles Dickerson of Takoma Park, Maryland.⁸²

FBI agents visited Mr. Dickerson at his residence and asked him to accompany them voluntarily to the local field office for questioning.⁸³ He was not arrested,⁸⁴

⁷⁸ "As far as I am concerned, such a time will have arrived when a case that comes within the terms of this statute is next presented to us." *Id.* at 464.

⁷⁹ *United States v. Dickerson*, 166 F.3d 667 (4th Cir. 1999), *rev'd*, 530 U.S. 428 (2000).

⁸⁰ *Id.* at 673.

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

although he later testified he felt he had no choice but to go to the FBI office.⁸⁵ Initially, Mr. Dickerson denied participation in the bank robbery.⁸⁶ A warrant was obtained to search his apartment.⁸⁷ When told of the warrant and the imminent search, Dickerson admitted to being the getaway driver⁸⁸ and was arrested.⁸⁹ The search yielded incriminating evidence including the handgun, dye-stained money, masks, and a bait bill from a prior robbery.⁹⁰

Mr. Dickerson's attorney sought to suppress the statement and the outcome of the search, arguing the confession was obtained in violation of *Miranda*.⁹¹ The trial court granted the defense motion.⁹² In response, the government first filed a motion to reconsider, providing additional information about the circumstances and arguing the statements were voluntary and, therefore, admissible under § 3501.⁹³ When this motion was denied,⁹⁴ the prosecutor filed an immediate interlocutory appeal asking the Fourth Circuit Court of Appeals to reinstate Mr. Dickerson's confession.⁹⁵ While the government initially pursued a § 3501 claim in the motion to reconsider in the district court, on appeal it instead pursued its claim under the more difficult but less controversial

⁸⁴ *Id.*

⁸⁵ *Id.* at n.2.

⁸⁶ *Id.* at 673.

⁸⁷ *Id.* at 673-74.

⁸⁸ *Id.* at 674.

⁸⁹ *Id.*

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.* at 675.

⁹³ *Id.* at 676.

⁹⁴ *Id.* at 677. The district court did not address the government's claim under § 3501, relying instead on Rule 59(e) of the Federal Rules of Criminal Procedure. *See United States v. Dickerson*, 971 F. Supp. 1023, 1024 (E.D. Va. 1997).

⁹⁵ *Dickerson*, 166 F.3d at 677.

traditional *Miranda* confessional jurisprudence.⁹⁶ The Fourth Circuit reviewed the § 3501 claim *sua sponte*.⁹⁷ In so doing, the court followed Justice Scalia’s suggestion in *Davis v. United States*.⁹⁸

In order to properly consider § 3501, the Fourth Circuit invited prominent *Miranda* critic Paul Cassell to present the *sua sponte* argument.⁹⁹ On the strength of his argument, the Fourth Circuit subsequently held § 3501 was an appropriate standard under which to consider Mr. Dickerson’s confession.¹⁰⁰ Under that standard, it reversed the District Court and reinstated the defendant’s confession.¹⁰¹ Mr. Dickerson’s attorney challenged the Fourth Circuit’s ruling by appealing to the United States Supreme Court. The High Court granted the defendant’s petition and set the case for oral argument.¹⁰²

Keeping Your Enemies Closer: Chief Justice Rehnquist’s Decision in Dickerson

As the Supreme Court’s 2000 term drew to a close, many significant issues remained. From determining the constitutionality of restrictions on partial birth abortion to the permissibility of California’s blanket primary, weighty issues of social significance awaited resolution. June 26, 2000 brought some answers. The day began with the

⁹⁶ Brief for the United States at n.19, *id.* (No. 97-4750).

⁹⁷ *Dickerson*, 166 F.3d at 672. (“[T]he Department of Justice cannot prevent us from deciding this case under governing law [§ 3501] simply by refusing to argue it.”).

⁹⁸ 512 U.S. 452, 464 (1994) (Scalia, J., concurring).

⁹⁹ The Justice Department’s unwillingness to advance the § 3501 argument required the court to appoint Professor Cassell. The Fourth Circuit’s opinion contains a detailed and lengthy description of its displeasure with the position taken by the government regarding § 3501. *See Dickerson*, 166 F.3d at 680-82.

¹⁰⁰ *Id.* at 672.

¹⁰¹ *Id.* at 695.

¹⁰² The Supreme Court similarly appointed Professor Cassell to argue the § 3501 theory. Solicitor General Seth Waxman, acting in an amicus capacity, argued against the enforcement of the statute.

rendering of the Court's opinion in *California Democratic Party v. Jones*¹⁰³ in which the Court invalidated the aforementioned blanket primary. The second and final decision of the day, however, substantially overshadowed this first decision by providing some closure to a nearly thirty-five year debate regarding *Miranda*'s constitutionality.

Prior to the Court's decision in *Dickerson v. United States*,¹⁰⁴ even *Miranda*'s strongest supporters had significant reason for concern. A decision upholding its constitutionality required the Supreme Court not only to rebuke the Congressional effort to legislatively limit *Miranda*, but also to disagree with the Fourth Circuit, an appellate court with whom the Supreme Court often sided. Yet, the most troubling hurdle that stood in front of *Miranda*'s continued viability was the prior voting records of the Court's membership. In particular, given his history there was substantial reason to believe Chief Justice Rehnquist would use *Dickerson* to finally purge the confessional jurisprudence of Chief Justice Warren's controversial 1966 decision.

Ultimately this concern was unrealized as Chief Justice Rehnquist, in a 7-2 majority opinion, declared *Miranda* to be a constitutional rule, thereby invalidating Congress's 1968 attempt to nullify it.¹⁰⁵ To support this proposition, the Chief argued that the *Miranda* court majority believed it imposed a constitutional rule because it specifically stated that it had granted certiorari to "give concrete *constitutional* guidelines for law enforcement agencies and courts to follow."¹⁰⁶ Further evidence of its

¹⁰³ 530 U.S. 567 (2000).

¹⁰⁴ 530 U.S. 428 (2000).

¹⁰⁵ *Id.* at 438.

¹⁰⁶ *Id.* at 439 (citing *Miranda*, 384 U.S. at 441-442) (emphasis added).

constitutionality was demonstrated through *Miranda*'s application against the states.¹⁰⁷ Specifically, because the Supreme Court typically refuses to apply non-constitutional mandates upon state authorities, and *Miranda*'s mandate upon state authorities was clear from its caption, *Miranda* had to be a constitutional decision.

Beyond the doctrinal rationales, the Chief also relied upon several policy justifications. First, he noted that in the years since its initial decision *Miranda* had become part of the “national culture.”¹⁰⁸ Essentially, he argued that although there was initial opposition to *Miranda*, it had through subsequent modification become a rule which both law enforcement and the public had come to accept. Of great significance, Chief Justice Rehnquist asserted that the doctrine of *stare decisis* also counseled against overruling *Miranda*. As cited earlier, “Whether or not we would agree with *Miranda*'s reasoning and its resulting rule, were we addressing the issue in the first instance, the principles of *stare decisis* weigh heavily against overruling it now.”¹⁰⁹

The Chief recognized the confusion of the Court of Appeals.¹¹⁰ In particular, his opinion notes how the lower court focused upon language contained in a series of post-*Miranda* decisions—opinions written by Justice Rehnquist himself. Specifically, the Fourth Circuit “relied on the fact that we have, after our *Miranda* decision, made

¹⁰⁷ *Id.* at 438.

¹⁰⁸ *Id.* at 443.

¹⁰⁹ *Id.*

¹¹⁰ *Id.* at 438. The Chief's recognition is only fair since it is Justice Rehnquist who created much of the confusion in the first place. Professor Kamisar argues, “I doubt that any Justice in Supreme Court history has dismissed his own majority opinions more summarily or nonchalantly” than Chief Justice Rehnquist in *Dickerson*. Kamisar, *supra* note 4 at 120.

exceptions from its rule.”¹¹¹ For Rehnquist, “These decisions illustrate the principle—not that *Miranda* is not a constitutional rule—but that no constitutional rule is immutable.”¹¹² He further stated, “If anything, our subsequent cases have reduced the impact of the *Miranda* rule on legitimate law enforcement while reaffirming the decision’s core ruling”¹¹³

Uniqueness Claims and The Problem of Observational Equivalence

For many, the surprising part of *Dickerson* was not so much the underlying result but rather the Chief’s position as author for the Court’s majority. The Chief’s opinion was such a vast departure from his prior reasoning that it left many scholars grappling for some sort of unifying doctrinal explanation. As noted earlier, many candidate theories purport to advance the unique explanation for Justice Rehnquist’s observed behavior.¹¹⁴ However, for a variety of reasons, these current explanations ultimately prove wanting.

First, most observers focus their doctrinal theses upon the wrong justice, since despite his authorship, it is not the Chief so much as Justices Kennedy and O’Connor who were likely swayed by such prudential considerations.¹¹⁵ Yet, most importantly, much of the current scholarship is at best incomplete because it entertains only a non-strategic view of Supreme Court decision-making.

¹¹¹ *Dickerson*, 530 U.S. at 441.

¹¹² *Id.*

¹¹³ *Id.* at 443.

¹¹⁴ See *supra* notes 8-11 and accompanying text.

¹¹⁵ See *Cruz*, *supra* note 2, at 14. (“As a practical matter, there was no way that Justice O’Connor or Justice Kennedy would possibly be willing to overrule *Miranda*. It was too established, too much a part of the legal firmament, for either of them to hazard extinguishing it.”).

In Part I, the article argued that Supreme Court decision-making is more than the final observed decision. The process contains a series of important procedural stages each of which produces the conditions for strategic behavior. While not every judicial outcome is the byproduct of a sophisticated maneuver, the prospect looms in every discrete case. Thus, any candidate explanation must successfully account for this possibility. Simply put, no uniqueness claim is supportable without complete consideration and refutation of potential alternative explanations. This point is demonstrated clearly through Figure 2.1. Therein, symmetry exists between upper and lower branches as virtually every upper trunk branch has a corresponding lower trunk complement. Although similar and in many ways observationally equivalent, the branches are not, in fact, identical. For example, the path to terminal branches 6A and 6B, i.e., where the Chief Justice joins the New Opinion Drafter, may appear similar. However, these two cases differ materially in stage 2.

The observable facts of *Dickerson* as applied to Figure 2.1 demonstrate the difficulty with supporting a uniqueness claim. In *Dickerson*, the Chief voted with the majority thereby garnering the power of opinion assignment. After assigning the opinion to himself, he successfully bargained with his fellow justices thereby sustaining his coalition. Each of these observable facts is consistent with terminal branches 6G and 6H, respectively. Much like those branches discussed above, while branches 6G and 6H feature deceptively similar final outcomes, they are not analogous; terminal branch 6G reflects strategic behavior while its counterpart, 6H, reflects a genuine, non-strategic path to the final outcome.

With two candidate explanations, only one of which can accurately reflect the true state of the world, query as to how to adjudicate between competing potential accounts? This article follows the available evidence reflected in Chief Justice Rehnquist's pre- and post-*Dickerson Miranda*-related jurisprudence.¹¹⁶ This evidence overwhelmingly favors 6G, the strategic explanation, as the unique explanation for the Chief's otherwise anomalous behavior in *Dickerson v. United States*.

Evaluating the Evidence: Justice Rehnquist's Prior Miranda Jurisprudence

Chief Justice Rehnquist's treatment of *Miranda* prior to *Dickerson* could hardly be deemed supportive of the rule. At virtually every turn, he sided against the 1966 ruling. Rehnquist first encountered *Miranda* while working for the Department of Justice. Through an April 1, 1969, memorandum, then Assistant Attorney General Rehnquist first disparaged Chief Justice Warren's holding by suggesting that the President panel a Commission to consider a constitutional amendment to overturn *Miranda*.¹¹⁷ Two months later, another memorandum, one with which Rehnquist was likely familiar and perhaps even authored, circulated throughout the Nixon Justice Department. This second memo outlined a set of litigation strategies designed to undercut the impact of the *Miranda* ruling.¹¹⁸ As Professor Kamisar has noted, the memo

¹¹⁶ At this point, the available evidence is limited to publicly observable voting behavior. Future research should review the internal conference notes and memoranda if and when such material becomes accessible.

¹¹⁷ Kamisar *supra* note 4 at 109.

¹¹⁸ *Id.* at 112-13. Even though the exact authorship of the second memorandum is unclear, it follows that through his administrative role as the head of the Office of Legal Counsel, a division which often provides opinions regarding the constitutionality of federal legislation, Assistant Attorney General Rehnquist must have been aware of, if not explicitly approved of, its contents. *Id.* at 113-14.

“foreshadowed the reasoning in later Supreme Court opinions disparaging *Miranda*.”¹¹⁹

“Indeed, looking back on the memorandum more than three decades later, it seems to have provided a road map for those who wanted to read *Miranda* as narrowly as possible.”¹²⁰

Just over two years later, Assistant Attorney General Rehnquist was nominated and then confirmed to the United States Supreme Court.¹²¹ Despite his recent entry to the institution, the newly minted Justice Rehnquist authored one of the first major post-*Miranda* rulings. In *Michigan v. Tucker*,¹²² he began his more than a quarter century of *Miranda* decisions by substantially limiting the scope of the doctrine. Rehnquist focused attention upon the specific text of Chief Justice Warren’s *Miranda* opinion, noting that the Constitution does not require “adherence to any particular solution.”¹²³ To Justice Rehnquist, this implied the *Miranda* warnings were less than fully constitutional. Therefore, in the *Tucker* opinion, he referred to them as “protective guidelines”¹²⁴ or “recommended procedural safeguards.”¹²⁵

Following *Tucker*, Justice Rehnquist’s continued his contribution to *Miranda*’s de-constitutionalization. Whether in the majority or minority, Rehnquist cast consistent

¹¹⁹ *Id.*

¹²⁰ *Id.* at 113.

¹²¹ William H. Rehnquist was sworn in as an Associate Justice of the United States Supreme Court on January 7, 1972.

¹²² 417 U.S. 433 (1974).

¹²³ *Miranda v. Arizona*, 384 U.S. 436, 467 (1966).

¹²⁴ 417 U.S. at 443.

¹²⁵ *Id.*; see also Kamisar *supra* note 4, at 116.

votes to minimize the reach of the doctrine. For example, in *North Carolina v. Butler*,¹²⁶ he agreed with the majority that, for *Miranda* purposes, an explicit waiver of an attorney is not required if the facts and circumstances support the notion that a waiver was executed. In *Rhode Island v. Innis*,¹²⁷ he voted to allow police to speak to an accused while transporting him even after the accused has invoked his right to counsel, as long as the conversation was not designed to produce incriminating statements. In *Jenkins v. Anderson*,¹²⁸ he joined a majority which permitted the State to impeach an accused who chooses to testify using his pre-arrest silence. Later, in *New York v. Quarles*,¹²⁹ Justice Rehnquist crafted a majority opinion creating a public safety exception to *Miranda*. The opinion relies heavily upon the notion of sub-constitutionality which he originally advanced in *Tucker*.

A year later, in *Oregon v. Elstad*,¹³⁰ Justice Rehnquist joined an opinion authored by Justice O'Connor in which the Court substantially limited the reach of the "fruit of the poisonous tree" doctrine.¹³¹ Like *Quarles*, the *Elstad* opinion relied heavily on *Tucker*, a move which appeared to solidify the notion of *Miranda*'s sub-constitutionality into the landscape of confessional jurisprudence. In sum, between his decision in *Tucker* and his

¹²⁶ 441 U.S. 369 (1979).

¹²⁷ 446 U.S. 291 (1980).

¹²⁸ 447 U.S. 231 (1980).

¹²⁹ 467 U.S. 649 (1984).

¹³⁰ 470 U.S. 298 (1985).

¹³¹ The phrase "fruit of the poisonous tree" was first used by Justice Frankfurter in *Nardone v. United States*, 308 U.S. 338, 341 (1939). It references the application of the exclusionary rule to secondary or derivative evidence obtained as a byproduct of an underlying illegal action by authorities. The court is left to determine whether such evidence is "tainted" by the violative act. For a discussion of the history and application of the fruit of the poisonous tree doctrine, see KAMISAR ET. AL., *supra* note 67, at 702-15, 906-22.

elevation to Chief,¹³² in essentially all of the thirty-three *Miranda*-related cases he encountered, Justice Rehnquist voted to limit the scope of the Court's original 1966 ruling.¹³³

¹³² William H. Rehnquist was sworn in as Chief Justice of the United States on September 26, 1986.

¹³³ Arguably in all thirty-three major *Miranda* related cases within the time period, Justice Rehnquist either distinguished or otherwise voted to limit the core doctrine. See *Oregon v. Elstad*, 470 U.S. 298 (1985) (finding that a statement made after receiving *Miranda* warning admissible even though the same statement had been made before the warning); *Shea v. Louisiana*, 470 U.S. 51 (1985) (Rehnquist, J., dissenting) (concluding that the new *Miranda* standard decided while case was on appeal should not apply when police properly relied upon old rule); *Smith v. Illinois*, 469 U.S. 91 (1984) (per curiam) (Rehnquist, J., dissenting) (asserting that police should be allowed to inquire as to whether accused's words actually invoked *Miranda* rights); *Berkemer v. McCarty*, 468 U.S. 420 (1984) (affirming that roadside questioning does not constitute "custodial interrogation" for purposes of *Miranda*); *New York v. Quarles*, 467 U.S. 649 (1984) (finding a public safety exception to *Miranda* exists when police ask for location of weapon hidden in public supermarket); *Solem v. Stumes*, 465 U.S. 638 (1984) (holding that *Edwards* was not retroactive as it does not enhance truth finding function of court, it was not foreshadowed, police relied upon prior standard, and retroactivity "would have a disruptive effect on administration of justice"); *Minnesota v. Murphy*, 465 U.S. 420 (1984) (stating that no *Miranda* warning needed when accused made incriminating statements to probation officer during required meeting, even when the "probation officer consciously sought incriminating evidence"); *California v. Beheler*, 463 U.S. 1121 (1983) (per curiam) (refusing to require *Miranda* rights to be read when the defendant voluntarily went to the police station); *Oregon v. Bradshaw*, 462 U.S. 1039 (1983) (clarifying that after invoking *Miranda* rights, accused can initiate conversation that eventually leads to admissible incriminating statements); *South Dakota v. Neville*, 459 U.S. 553 (1983) (holding that "admission into evidence of defendant's refusal to submit to blood-alcohol test does not offend his privilege against self-incrimination" and requires no warning at the time of refusal); *Taylor v. Alabama*, 457 U.S. 687 (1982) (O'Connor, J., dissenting) (arguing confession after illegal arrest should be admitted into evidence, given *Miranda* warning, lack of police intimidation, intervening events, and lack of continuous interrogation); *Fletcher v. Weir*, 455 U.S. 603 (1982) (per curiam) (concluding that since defendant chose to testify, his post-arrest silence can be used for impeachment); *California v. Prysock*, 453 U.S. 355 (1981) (per curiam) (deciding that "content of *Miranda* warnings need not be a virtual incantation of the precise language contained in the *Miranda* opinion"); *Edwards v. Arizona*, 451 U.S. 477 (1981) (Powell, J., concurring) (refusing to create a new per se rule requiring defendant to initiate communication after invoking his *Miranda* rights); *Estelle v. Smith*, 451 U.S. 454 (1981) (Rehnquist, J., concurring) (noting that he does not find a right to counsel at a pre-trial medical examination, though notice needed to be given if the doctor was to testify); *California v. Prysock*, 451 U.S. 1301 (1981) (ordering stay on judgment reversing conviction due to inadequate warning under *Miranda*); *United States v. Henry*, 447 U.S. 264 (1980) (Rehnquist, J., dissenting) (arguing that post-arrest conversation between defendant and a government informant should not require *Miranda* warning to be admissible); *Jenkins v. Anderson*, 447 U.S. 231 (1980) (holding that prearrest silence can be used to impeach a testifying defendant); *Rhode Island v. Innis*, 446 U.S. 291 (1980) (finding statement by defendant to police after invocation of *Miranda* rights admissible so long as police did not expressly question the defendant or know that their comments

This article contends that institutional rules matter and thus, following his elevation to Chief, the strategic environment arguably changed for Chief Justice Rehnquist. As a result, one might expect to observe unusual and potentially strategic voting patterns by the now Chief Justice. In reality, for many *Miranda*-related cases following his elevation, strategic behavior was simply unnecessary. Specifically, with

were “reasonably likely” to provoke incriminating response); *Roberts v. United States*, 445 U.S. 552 (1980) (permitting defendant’s failure to cooperate with police to be used as aggravating factor to secure consecutive sentences); *Fare v. Michael C.*, 442 U.S. 707 (1978) (distinguishing that request to speak to probation officer is not *per se* invocation of *Miranda* rights); *Dunaway v. New York*, 442 U.S. 200 (1979) (Rehnquist, J., dissenting) (arguing that even after an illegal arrest, “voluntary” incriminating statements given in police custody after a *Miranda* warning should be admissible); *North Carolina v. Butler*, 441 U.S. 369 (1979) (requiring no explicit waiver of right to an attorney as long as facts and circumstances support such a conclusion); *Fare v. Michael C.*, 439 U.S. 1310 (1978) (granting state request for stay of California Supreme Court ruling that juvenile request for probation officer constitutes invocation of *Miranda* rights); *Brewer v. Williams*, 430 U.S. 387 (1977) (Blackmun, J., dissenting) (arguing that, after a defendant has asserted his right to counsel, police comments on desire to find and preserve body of victim were not “interrogation” and defendant’s responses should be admissible if voluntary, even without an express waiver of *Miranda* rights); *Oregon v. Mathiason*, 429 U.S. 492 (1977) (per curiam) (concluding that interrogation of suspect at police station who came voluntarily and was allowed to leave without hindrance was not “custodial” for purposes of *Miranda* rule, even if police informed man he was a suspect and lied about evidence they had against him); *Doyle v. Ohio*, 426 U.S. 610 (1976) (Stevens, J., dissenting) (arguing that prosecutors should be allowed to use post-arrest silence to impeach defendants who choose to testify); *United States v. Mandujano*, 425 U.S. 564 (1976) (finding that “putative” defendant need not be given *Miranda* warnings when called to testify to a grand jury and false statements can be used to bring perjury charges); *Beckwith v. United States*, 425 U.S. 341 (1976) (holding that non-custodial interview by Internal Revenue agents about tax liability of defendant does not require *Miranda* warnings); *Garner v. United States*, 424 U.S. 648 (1976) (holding that incriminatory disclosure on tax return not protected under Fifth Amendment, as defendant could have claimed privilege against self-incrimination on return); *Michigan v. Mosley*, 423 U.S. 96 (1975) (finding no *Miranda* violation if accused invoked right to silence before one detective and hours later is interviewed by a different one on a different matter, so long as first request “was scrupulously honored” as to the first case); *Michigan v. Tucker*, 417 U.S. 433 (1974) (concluding that evidence gained as a result of interrogation prior to *Miranda* decision upon warning of right to counsel but no warning of state’s willingness to provide one at no cost if needed need not be excluded, given adherence of police to the law of the time and reliability of the evidence). In the only *Miranda*-related Supreme Court decision considered by Justice Rehnquist prior to *Tucker*, Justice Rehnquist again voted to limit the core holding of *Miranda*. See *Schneekloth v. Bustamonte*, 412 U.S. 218 (1973) (Powell, J., concurring) (agreeing with the Court’s holding that police need not inform a person of the right to refuse for a consent search to be voluntary).

respect to limiting the *Miranda* doctrine, Justice Rehnquist had willing partners in Justices O'Connor and Kennedy.¹³⁴ Their support allowed the Chief to vote his “genuine” preferences without concern.¹³⁵

¹³⁴ The Chief Justice must have known that Justices O'Connor and Kennedy had a substantial history supporting his position on *Miranda*. Of the most significant *Miranda* opinions decided since she joined the Court in September, 1981, Justice O'Connor supported Chief Justice Rehnquist twenty-five times. See *Davis v. United States*, 512 U.S. 452 (1994); *Winthrow v. Williams*, 507 U.S. 680, 697 (1993) (O'Connor, J. concurring in part, dissenting in part); *Ylst v. Nunnemaker*, 501 U.S. 797 (1991); *McNeil v. Wisconsin*, 501 U.S. 171 (1991); *Pennsylvania v. Muniz*, 496 U.S. 582 (1990) (Parts I, II, IIIA, IV); *Illinois v. Perkins*, 496 U.S. 292 (1990); *New York v. Harris*, 495 U.S. 14 (1990); *Michigan v. Harvey*, 494 U.S. 344 (1990); *Duckworth v. Eagan*, 492 U.S. 195 (1989); *Patterson v. Illinois*, 487 U.S. 285 (1988); *Greer v. Miller*, 483 U.S. 756 (1987); *Arizona v. Mauro*, 481 U.S. 520 (1987); *Colorado v. Spring*, 479 U.S. 564 (1987); *Connecticut v. Barrett*, 479 U.S. 523 (1987); *Colorado v. Connelly*, 479 U.S. 157 (1986); *Michigan v. Jackson*, 475 U.S. 625, 637 (1986) (Rehnquist, C. J., dissenting); *Moran v. Burbine*, 475 U.S. 412 (1986); *Oregon v. Elstad*, 470 U.S. 298 (1985); *Shea v. Louisiana*, 470 U.S. 51, 61, 65 (1985) (White, J., dissenting and, also separately, Rehnquist, J., dissenting); *Berkemer v. McCarty*, 468 U.S. 420 (1984); *Solem v. Stumes*, 465 U.S. 638 (1984); *Minnesota v. Murphy*, 465 U.S. 420 (1984); *Oregon v. Bradshaw*, 462 U.S. 1039 (1983); *South Dakota v. Neville*, 459 U.S. 553 (1983); *Taylor v. Alabama*, 457 U.S. 687 (1982). Justice Kennedy commenced his service in February, 1988. Although his mutual association was shorter than Justice O'Connor, out of fourteen opportunities, he voted ten times exactly with the position of the Chief Justice. See *Davis v. United States*, 512 U.S. 452 (1994); *Brecht v. Abrahamson*, 507 U.S. 619 (1993); *Ylst v. Nunnemaker*, 501 U.S. 797 (1991); *McNeil v. Wisconsin*, 501 U.S. 171 (1991); *Illinois v. Perkins*, 496 U.S. 292 (1990); *New York v. Harris*, 495 U.S. 14 (1990); *Michigan v. Harvey*, 494 U.S. 344 (1990); *Duckworth v. Eagan*, 492 U.S. 195 (1990); *Patterson v. Illinois*, 487 U.S. 285 (1988); *Arizona v. Mauro*, 481 U.S. 520 (1987) (Kennedy, J., dissenting). To be considered a common vote, the positions must be exact. For example, the Chief Justice might join with a Concurring Opinion of the Associate Justice. This would be an exact match. If the Chief and Associate Justice wrote separate concurring Opinions, this would not be an exact match, even though the two opinions might take similar positions. Per Curiam decisions also were excluded as these tend to be rather routine matters. The decisions of Justices O'Connor and Kennedy to vote in favor of the constitutionality of *Miranda* must have conveyed a powerful message to the Chief Justice.

¹³⁵ In the time between his elevation and his opinion in *Dickerson*, the Rehnquist Court considered an additional twenty-four *Miranda* related cases. In each of these cases, just as before his elevation, Justice Rehnquist took every possible opportunity to undercut, distinguish or otherwise limit the initial *Miranda* decision. See *Thompson v. Keohane*, 516 U.S. 99 (1995) (Thomas, J., dissenting) (arguing that the trial court was best suited to determine if the accused was in custody and in so doing it held no *Miranda* violation); *Davis v. United States*, 512 U.S. 452 (1994) (concluding that when a request for a lawyer is ambiguous, the questioning can continue without a *Miranda* violation); *Stansbury v. California*, 511 U.S. 318 (1994) (per curiam) (finding that custody is an objective, not subjective, standard); *Withrow v. Williams*, 507 U.S. 680 (1993) (O'Connor, J., concurring in part and dissenting in part) (stating that there is no federal habeas relief for a *Miranda* violation); *Brecht v. Abrahamson*, 507 U.S. 619 (1993) (finding that

For example, consider *New York v. Harris*,¹³⁶ where the now Chief Justice voted that even after a warrantless search in violation of the Fourth Amendment, the exclusionary rule did not apply to a subsequent incriminating statement made after *Miranda* warnings were given. In *Illinois v. Perkins*,¹³⁷ he joined a court majority that declared *Miranda* was not violated when an undercover inmate elicited a statement from

a *Miranda* violation occurred but it was harmless error based on facts of case); *Illinois v. Perkins*, 496 U.S. 292 (1992) (holding that *Miranda* is not violated if the accused elects to speak to a fellow inmate placed undercover in his cell); *Ylst v. Nunnemaker*, 501 U.S. 797 (1991) (holding that there is no federal indirect attack for *Miranda* violations); *McNeil v. Wisconsin*, 501 U.S. 171 (1991) (deciding that an accused who had counsel for one crime can be questioned for another crime after *Miranda* warnings); *Minnick v. Mississippi*, 498 U.S. 146 (1990) (Scalia, J., dissenting) (arguing that an accused who had counsel, and consulted with counsel, could waive his *Miranda* rights and be questioned further by police); *Pennsylvania v. Muniz*, 496 U.S. 582 (1990) (Rehnquist, C. J., concurring in part, concurring in result in part and dissenting in part) (stating that questioning for driving under the influence of alcohol, in the absence of *Miranda*, is non-testimonial because it shows the impact on the speech); *New York v. Harris*, 495 U.S. 14 (1990) (holding that no exclusionary rule applies when, after *Miranda* warnings, an accused made incriminating statement after an illegal search of the home); *Michigan v. Harvey*, 494 U.S. 344 (1990) (asserting that statements acquired in violation of *Miranda* can be used to impeach the accused); *Duckworth v. Eagan*, 492 U.S. 195 (1989) (concluding that a *Miranda* form which states that a lawyer would be appointed only “if and when” he goes to court does not violate *Miranda*); *Pennsylvania v. Bruder*, 488 U.S. 9 (1988) (per curiam) (deciding that ordinary traffic stops do not amount to custody requiring *Miranda* warnings); *Patterson v. Illinois*, 487 U.S. 285 (1988) (finding that *Miranda* warnings effectively waived counsel despite the fact the accused had already been indicted); *Arizona v. Roberson*, 486 U.S. 675 (1988) (Kennedy, J., dissenting) (arguing that even though the accused had invoked his rights, this was a separate investigation involving a separate crime so no *Miranda* violation occurred); *Greer v. Miller*, 483 U.S. 756 (1987) (finding that a comment at trial on the defendant’s right to silence was error, but it was harmless here since the Court made two curative instructions); *Arizona v. Mauro*, 481 U.S. 520 (1987) (holding that statements made by the accused to his wife in the presence of the police are not suppressible); *Colorado v. Spring*, 497 U.S. 564 (1987) (finding no *Miranda* violation if, after *Miranda* rights were read, the accused believed the interview involved one crime but really was designed for another); *Connecticut v. Barrett*, 479 U.S. 523 (1987) (determining that after *Miranda* warning there was no violation if the accused refused a written statement but agreed to an oral one); *Colorado v. Connelly*, 479 U.S. 157 (1986) (finding no *Miranda* violation when a mentally ill person waives his rights and holding that the state must prove a waiver of rights only by preponderance of evidence); *Michigan v. Jackson*, 475 U.S. 625 (1986) (Rehnquist, C. J., dissenting) (concluding that there is no Sixth Amendment violation where the accused requested an attorney at an arraignment and later waived an attorney after administration of *Miranda* rights); *Moran v. Burbine*, 475 U.S. 412 (1986) (finding no *Miranda* violation when an accused waived his rights although he was unaware that an attorney already had been appointed for him); *Wainwright v. Greenfield*, 474 U.S. 284 (1986) (Rehnquist, C. J., concurring) (holding that a request for a lawyer does not imply guilt so comments before the jury possibly could have been harmless).

¹³⁶ 495 U.S. 14.

¹³⁷ 496 U.S. 292.

a fellow inmate. In *Withrow v. Williams*,¹³⁸ Justice Rehnquist joined a dissent that voted to exclude *Miranda* violations from federal habeas review. Finally, in *Davis v. United States*,¹³⁹ he supported an opinion that held that so long as the request for a lawyer was ambiguous, questioning could continue without a *Miranda* violation.

Taken together, from *Tucker* to *Dickerson*, the Chief participated in a total of fifty-seven major *Miranda*-related cases.¹⁴⁰ Arguably in all of these cases, the Chief

¹³⁸ 507 U.S. 680.

¹³⁹ 512 U.S. 452.

¹⁴⁰ See *Dickerson v. United States*, 530 U.S. 428 (2000); *Thompson v. Keohane*, 516 U.S. 99, 116 (1995) (Thomas, J., dissenting); *Davis v. United States*, 512 U.S. 452 (1994); *Stansbury v. California*, 511 U.S. 318 (1994); *Withrow v. Williams*, 507 U.S. 680, 700 (1993) (O'Connor, J., concurring in part and dissenting in part); *Brecht v. Abrahamson*, 507 U.S. 619 (1993); *Ylst v. Nunnemaker*, 501 U.S. 797 (1991); *McNeil v. Wisconsin*, 501 U.S. 171 (1991); *Minnick v. Mississippi*, 498 U.S. 146, 156 (1990) (Scalia, J., dissenting); *Pennsylvania v. Muniz*, 496 U.S. 582, 603 (1990) (Rehnquist, C.J., concurring in part, concurring in the result in part, and dissenting in part); *Illinois v. Perkins*, 496 U.S. 292 (1990); *New York v. Harris*, 495 U.S. 14 (1990); *Michigan v. Harvey*, 494 U.S. 344 (1990); *Duckworth v. Eagan*, 492 U.S. 195 (1989); *Pennsylvania v. Bruder*, 488 U.S. 9 (1988); *Patterson v. Illinois*, 487 U.S. 285 (1988); *Arizona v. Roberson*, 486 U.S. 675, 690 (1988) (Kennedy, J., dissenting); *Greer v. Miller*, 483 U.S. 756 (1987); *Arizona v. Mauro*, 481 U.S. 520 (1987); *Colorado v. Spring*, 479 U.S. 564 (1987); *Connecticut v. Barrett*, 479 U.S. 523 (1987); *Colorado v. Connelly*, 479 U.S. 157 (1986); *Michigan v. Jackson*, 475 U.S. 625, 638 (1986) (Rehnquist, J., dissenting); *Moran v. Burbine*, 475 U.S. 412 (1986); *Wainwright v. Greenfield*, 474 U.S. 284, 296 (1986) (Rehnquist, J., concurring); *Oregon v. Elstad*, 470 U.S. 298 (1985); *Shea v. Louisiana*, 470 U.S. 51, 61, 67 (1985) (White, J. and Rehnquist, J., dissenting); *Smith v. Illinois*, 469 U.S. 91, 100-01 (1984) (per curiam) (Rehnquist, J., dissenting); *Berkemer v. McCarty*, 468 U.S. 420 (1984); *New York v. Quarles*, 467 U.S. 649 (1984); *Solem v. Stumes*, 465 U.S. 638 (1984); *Minnesota v. Murphy*, 465 U.S. 420 (1984); *California v. Beheler*, 463 U.S. 1121 (1983); *Oregon v. Bradshaw*, 462 U.S. 1039 (1983); *South Dakota v. Neville*, 459 U.S. 553 (1983); *Taylor v. Alabama*, 457 U.S. 687, 697-98 (1982) (O'Connor, J., dissenting); *Fletcher v. Weir*, 455 U.S. 603 (1982); *California v. Prysock*, 453 U.S. 355 (1981); *Edwards v. Arizona*, 451 U.S. 477, 491-92 (1981) (Powell, J., concurring); *Estelle v. Smith*, 451 U.S. 454, 475 (1981) (Rehnquist, J., concurring); *California v. Prysock*, 451 U.S. 1301 (1981); *United States v. Henry*, 447 U.S. 264, 293-94 (1980) (Rehnquist, J., dissenting); *Jenkins v. Anderson*, 447 U.S. 231 (1980); *Rhode Island v. Innis*, 446 U.S. 291 (1980); *Roberts v. United States*, 445 U.S. 552 (1980); *Fare v. Michael C.*, 442 U.S. 707 (1979); *Dunaway v. New York*, 442 U.S. 200, 226 (1979) (Rehnquist, J., dissenting); *North Carolina v. Butler*, 441 U.S. 369 (1979); *Fare v. Michael C.*, 439 U.S. 1310 (1978); *Brewer v. Williams*, 430 U.S. 387, 435-36 (1977) (White, J. and Blackmun, J., dissenting); *Oregon v. Mathiason*, 429 U.S. 492 (1977); *Doyle v. Ohio*, 426 U.S. 610, 620-21 (1976) (Stevens, J., dissenting); *United States v. Mandujano*, 425 U.S. 564 (1976); *Beckwith v. United States*, 425 U.S. 341 (1976); *Garner v. United States*, 424 U.S. 648 (1976); *Michigan v. Mosley*, 423 U.S. 96 (1975); *Michigan v. Tucker*, 417 U.S. 433 (1974).

either voted to distinguish or limit the scope of the 1966 ruling.¹⁴¹ In case after case, the *Miranda* doctrine found no friend in William Rehnquist.

Yet, when it came to *Dickerson*, the trend abruptly ended. Admittedly, it is possible that despite nearly thirty years of behaving otherwise, Justice Rehnquist genuinely believed in *Miranda*'s constitutionality. Alternatively, perhaps the truth is precisely as the Chief described it in his opinion. Specifically, *stare decisis* is such an important value that it induced his capitulation. Yet, because in *Dickerson* the Chief could no longer count upon his long-standing alliance with Justices O'Connor and Kennedy,¹⁴² his true policy preferences cannot be derived from within the *Dickerson* decision. Simply put, regardless of the Chief's vote in *Dickerson*, it appears the majority of the Court—including some of *Miranda*'s critics—was going to support the centerpiece of the Warren Court's criminal procedure revolution.¹⁴³

As noted before, Justices O'Connor and Kennedy, along with the Chief, had similar histories of voting to limit *Miranda*.¹⁴⁴ Had they voted with Justices Scalia and Thomas in the conference, the Chief Justice would only need to join them to make a five-member majority. Given his grudging interpretation of the *Miranda* doctrine,¹⁴⁵ it is difficult to believe that if given the opportunity to cast a deciding vote, he would have

¹⁴¹ See *supra* notes 120-131 and accompanying text.

¹⁴² Cruz, *supra* note 113 and accompanying text.

¹⁴³ *Id.* Those arguing that the Chief Justice's decision was the product of a sensitivity to public opinion, respect for the principle of *stare decisis*, or separation of powers might better apply those theories to explain the behavior of Justices O'Connor and Kennedy in *Dickerson*.

¹⁴⁴ See *supra* note 132 and accompanying text.

¹⁴⁵ For a description of Justice Rehnquist's *Miranda* related voting record see *supra* notes 120-131 and accompanying text.

come to *Miranda*'s rescue. However, by all indications, Justices O'Connor and Kennedy were initially in the pro-*Miranda* majority.¹⁴⁶ This reduced the Chief's feasible set leaving him with one remaining question: whether to vote with the majority and thereby secure for himself the assignment decision or allow that authority to be exercised by Justice Stevens.

The Chief chose the former. His choice does not itself completely elucidate the true nature of the Chief's policy preferences. Again, it is possible that, in his later years, the Chief moderated his views.¹⁴⁷ In order to evaluate this contingency, as well as to fully understand the nature of the strategic maneuver, a review of Justice Rehnquist's post-*Dickerson* behavior is warranted.

Evaluating the Evidence: Chief Justice Rehnquist's Post-Dickerson Miranda Jurisprudence

Between his decision in *Dickerson* and his death, the Rehnquist-led Court considered five major *Miranda*-related cases.¹⁴⁸ In each of these cases, the Chief resumed exactly where he left off prior to *Dickerson*. Consider *Chavez v. Martinez*,¹⁴⁹ where Justice Rehnquist voted to prevent a § 1983 claim against police officers, holding that until unwarned statements are used at trial, there is no violation.¹⁵⁰ This vote is

¹⁴⁶ Cruz, *supra* note 113 and accompanying text.

¹⁴⁷ See Rosen, *supra* notes 5, 18 and accompanying text. *Contra* Cruz, *supra* note 2 and accompanying text.

¹⁴⁸ See United States v. Patane, 542 U.S. 630 (2004); Missouri v. Seibert, 542 U.S. 600 (2004); Yarborough v. Alvarado, 541 U.S. 652 (2004); Fellers v. United States, 540 U.S. 519 (2004); Chavez v. Martinez, 538 U.S. 760 (2003).

¹⁴⁹ 538 U.S. 760 (2003).

¹⁵⁰ Rehnquist explained:

curious because it is inconsistent with the position he purported to announce in *Dickerson*. Specifically, *Chavez* implies that a failure to comply with *Miranda* is somehow different from other violations of the Constitution where § 1983 permits recovery.¹⁵¹

His behavior in *Chavez* was soon followed by the 2004 companion “fruit of the poisonous tree” cases, *Missouri v. Seibert*¹⁵² and *United States v. Patane*.¹⁵³ In *Seibert*, although a combined majority of the Court condemned the intentional use of a two-stage interrogation process designed to frustrate *Miranda*, the Chief joined the dissenting justices.¹⁵⁴ In *Patane*, Justice Rehnquist again joined an opinion which furthered the

We have likewise established the *Miranda* exclusionary rule as a prophylactic measure to prevent violations of the right protected by the text of the Self-Incrimination Clause—the admission into evidence in a criminal case of confessions obtained through coercive custodial questioning. Accordingly, *Chavez*’s failure to read *Miranda* warnings to Martinez did not violate Martinez’s constitutional rights and cannot be grounds for a § 1983 action. And the absence of a “criminal case” in which Martinez was compelled to be a “witness” against himself defeats his core Fifth Amendment claim.

Id. at 772-73 (citations omitted).

¹⁵¹ Apparently, for the Chief, a *Miranda* violation held a lower constitutional status than, for example, a violation of the Fourth Amendment. It has long been held that an illegal search in violation of the Fourth Amendment can be authority for § 1983 action. *See, e.g.,* *Monroe v. Pape*, 365 U.S. 167 (1961), *overruled on unrelated grounds*; *Monnell v. Dep’t of Soc. Services*, 436 U.S. 658 (1978) (finding that unreasonable search and seizure by police officers supports a claim under § 1983); *Finsel v. Cruppenik*, 326 F.3d 903 (7th Cir. 2003) (holding that unlawful searches, excessive use of force and false imprisonment are actionable under § 1983 where deputy could not reasonably believe he could kick in a motel door and forcibly enter a room simply to effectuate motel clerk’s desire to have a patron’s truck moved); *Bolden v. Village of Monticello*, 344 F. Supp. 407 (S.D.N.Y. 2004) (finding that because no reasonable officer could believe a no-knock warrant authorizing search of a location and all persons located inside without naming specific individuals authorized invasive strip and body cavity searches, a § 1983 claim may be pursued); *Terrell v. Petrie*, 763 F. Supp. 1342 (E.D. Va. 1991) (concluding that a search incident to a pretext arrest is unreasonable and violates Fourth Amendment, for which a claim under § 1983 is available).

¹⁵² 542 U.S. 600 (2004).

¹⁵³ 542 U.S. 630 (2004). For a discussion of *Siebert*, *Patane* and *Chavez*, see Yale Kamisar, *PostScript: Another Look at Patane and Siebert, the 2004 Miranda “Poisoned Fruit” Cases*, 2 OHIO ST. J. OF CRIM. L. 97 (2004).

¹⁵⁴ *Seibert*, 542 U.S. at 622 (O’Connor, J., dissenting). Justice O’Connor relied heavily on the analysis in *Oregon v. Elstad*, 470 U.S. 298 (1985), stating, “*Elstad* commands that if *Siebert*’s first statement is shown to have been involuntary, the court must examine whether the taint dissipated through the passing of time or a change of circumstances.” *Id.* at 628.

notion that a *Miranda* violation is different from and less important than violations of other portions of the Constitution,¹⁵⁵ as evidenced by descriptions of non-*Miranda* constitutional rights as “core protection,”¹⁵⁶ “core privilege,”¹⁵⁷ “actual right,”¹⁵⁸ “actual protections,”¹⁵⁹ and “actual violations,”¹⁶⁰ thus distinguishing *Miranda* issues from “true” constitutional doctrines.¹⁶¹ *Patane*, much like its pre-*Dickerson* counterpart *Elstad*,¹⁶² operates to preclude the application of the fruit of the poisonous tree doctrine to *Miranda* violations.¹⁶³ This differential treatment in *Elstad* was based upon the notion of *Miranda*’s sub-constitutionality.¹⁶⁴ Following Chief Justice Rehnquist’s opinion in *Dickerson* declaring *Miranda* a constitutional rule, the notion of sub-constitutionality no longer seemed sustainable. Yet, Justice Thomas’s opinion in *Patane* follows this sub-constitutional approach anyway by using the “prophylactic” language—terminology

¹⁵⁵ 542 U.S. at 633.

¹⁵⁶ *Id.* at 637.

¹⁵⁷ *Id.* at 638.

¹⁵⁸ *Id.* at 639.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.* at 642.

¹⁶¹ This point is appropriately raised by Professor Kamisar:

At no time in *Dickerson* did Chief Justice Rehnquist contrast the prophylactic rules of *Miranda* with the ‘actual Self-Incrimination Clause.’ Nor, in *Dickerson*, did he ever contrast *Miranda* violations with a ‘core’ violation of the Self-Incrimination Clause itself. Indeed at no time in *Dickerson* did Rehnquist call the *Miranda* rules ‘prophylactic.’ However, in his *Patane* plurality opinion, Justice Thomas repeatedly characterized the *Miranda* rules as ‘prophylactic’ and repeatedly refers to ‘the core protection afforded by the Self-Incrimination Clause,’ ‘the core privilege against self-incrimination’ protected by prophylactic rules, ‘the actual right against compelled self-incrimination’ and ‘actual violations of the Due Process Clause or the Self-Incrimination Clause.

Kamisar, *supra* note 4, at 125-26.

¹⁶² *Oregon v. Elstad*, 470 U.S. 298, 308 (1985).

¹⁶³ “Thus, unlike unreasonable searches under the Fourth Amendment or *actual* violations of the Due Process Clause or the Self-Incrimination Clause, there is, with respect to *mere* failures to warn, nothing to deter. There is therefore no reason to apply the ‘fruit of the poisonous tree’ doctrine of *Wong Sun*.” *Patane*, 542 U.S. at 642 (emphasis added). See Kamisar, *supra* note 4, at 124-26.

¹⁶⁴ 470 U.S. at 305.

associated with *Miranda*'s sub-constitutionality—which does not appear anywhere in the Chief Justice's opinion in *Dickerson*.¹⁶⁵

Despite his opinion in *Dickerson* supporting *Miranda*'s constitutionality, Justice Rehnquist supported positions in *Seibert*, *Patane*, *Chavez*, and other cases that described a *Miranda* violation as somehow different from other constitutional violations. For Chief Justice Rehnquist, that difference operated to preclude the application of traditional constitutional remedies such as § 1983¹⁶⁶ as well as the suppression mechanism available through the fruit of the poisonous tree doctrine.¹⁶⁷ Simply put, the Chief's post-*Dickerson* behavior, taken together with his pre-*Dickerson* voting, makes it almost impossible to avoid the conclusion—despite what he seemed to say in *Dickerson*—that Chief Justice William Rehnquist did not really believe that *Miranda* was a constitutionally based decision.

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From these post-*Dickerson* cases, it is clear that the Chief's 2000 decision did not reflect a new found respect for *Miranda*. Instead, with the direct question of *Miranda*'s constitutionality already decided by a majority of the *Dickerson* Court, Chief Justice Rehnquist did the best he could given the reduced choices in his feasible set.¹⁶⁸ Rather than allow Justice Stevens the power of opinion assignment, he voted with the majority

¹⁶⁵ Kamisar, *supra* note 4, at 125-26.

¹⁶⁶ *Chavez v. Martinez*, 538 U.S. 760, 776 (2003).

¹⁶⁷ *Patane*, 542 U.S. at 642.

¹⁶⁸ *See Cruz, supra* note 2, at 15. (“Although not what one would describe as the tightest of logical syllogisms, it was the best that could be gotten from the current members of the Court.”).

and assigned himself the opinion.¹⁶⁹ Given his decision to craft a majority opinion, the Chief needed a rationale sufficient to garner a court majority. Thus, he cited *stare decisis* and the Warren Court's own view of what it was doing as justification for his support of *Miranda*.¹⁷⁰

With the apparent elevation of *Miranda* to a fully constitutional status, the exceptions that had been built upon *Miranda*'s sub-constitutional foundation stood in peril. Justice Stevens, the alternative opinion assignor, had a long history of resisting the *Miranda* exceptions.¹⁷¹ After spending nearly thirty years crafting limitations to *Miranda*, it is hard to believe the Chief would allow Justice Stevens the opportunity to undo his legacy. Chief Justice Rehnquist thus took control of the future of the doctrine and crafted an opinion that both studiously avoided discussion of the continued viability

¹⁶⁹ “Had the Chief voted with the dissenters, the majority opinion would have been assigned by the senior Justice in the majority, in this case Justice Stevens. . . . [I]n my judgment, the Chief acted decisively to avoid that consequence. He voted with the majority and assigned the opinion to himself.” *Id.* at 14-15.

¹⁷⁰ *Dickerson v. United States*, 530 U.S. 428, 442-43 (2000). Cruz, the former Rehnquist clerk implies that the *stare decisis* rationale is a subterfuge. In responding to questions regarding *Dickerson*'s logical underpinning Cruz responds, “do not ask why, and please, never, ever, ever cite this opinion for any reason.” Cruz, *supra* note 2, at 15.

¹⁷¹ A cursory review of the voting records demonstrates that most of the *Miranda* exceptions supported by Chief Justice Rehnquist were opposed by Justice Stevens. *See, e.g.*, *New York v. Harris*, 495 U.S. 14 (1990); *New York v. Quarles*, 467 U.S. 649 (1984); *Rhode Island v. Innis*, 446 U.S. 291 (1980); *North Carolina v. Butler*, 441 U.S. 369 (1979). Additionally, in some cases with *Miranda* issues, Justice Stevens prevailed while Chief Justice Rehnquist dissented. *See, e.g.*, *Thompson v. Keohane*, 516 U.S. 99 (1995); *Minnick v. Mississippi*, 498 U.S. 146 (1990); *Arizona v. Roberson*, 486 U.S. 675 (1988); *Michigan v. Jackson*, 475 U.S. 625 (1986); *Shea v. Louisiana*, 470 U.S. 51 (1985); *Smith v. Illinois*, 469 U.S. 91 (1984); *Taylor v. Alabama*, 457 U.S. 687 (1982); *United States v. Henry*, 447 U.S. 264 (1980); *Dunaway v. New York*, 442 U.S. 200 (1979). Evidence of Justice Stevens' view is also prominently demonstrated in *Oregon v. Elstad*, 470 U.S. 298 (1985), where the oral argument displayed an exchange between Justices Stevens and O'Connor regarding the constitutional underpinning of the *Miranda* decision. “I must confess that if it's not a constitutional violation, I don't know where this Court ever had the power to set aside any state conviction. . . . It seems to me analytically it must be a constitutional violation or else we have no business in this area at all.” Transcript of Oral Argument at 49, *id.* (No. 83-773).

of the *Miranda* exceptions and included language designed to aid in his final stand. Although dicta in *Dickerson*, he argued that *Miranda*'s newly discovered constitutionality was premised on its current form, a form which included all of its exceptions. Specifically, he stated, "our subsequent cases have reduced the impact of the *Miranda* rule on legitimate law enforcement while re-affirming the decision's core ruling"¹⁷²

This sentence later became a centerpiece of the *Patane* opinion.¹⁷³ Justice Thomas, with the support of the Chief, argued that both this language as well as the *Dickerson* Court's reliance upon cases such as *Tucker* and *Elstad* "demonstrate[d] the continuing validity of those decisions" following *Dickerson*.¹⁷⁴ Although dicta, Rehnquist's wording that "subsequent cases [had] reduced the impact on law enforcement" somehow passed without public objection, as *Dickerson* features the complete absence of any concurring opinion. Yet, it is this sentence which is the Trojan horse of the *Dickerson* decision. To be precise, the genius of the *stare decisis* rationale as applied by the Chief Justice in *Dickerson* is that he applied it to *all* aspects of the *Miranda* doctrine, exceptions included.

Thus, once again, when the Chief Justice elected to join the majority and assigned the opinion to himself, he both denied Justice Stevens control over the matter and crafted the very language that would later be used to argue that all of the exceptions are part of

¹⁷² *Dickerson*, 530 U.S. at 443.

¹⁷³ *United States v. Patane*, 542 U.S. 630 (2004).

¹⁷⁴ *Id.* at 640.

his constitutional decision. Many of those exceptions, of course, are based upon the sub-constitutional treatment for this “constitutional” rule.

CHAPTER THREE

HUSTLE AND FLOW: A SOCIAL NETWORK ANALYSIS OF THE AMERICAN FEDERAL JUDICIARY¹

Scholars have long asserted that social structure is an important feature of a variety of societal institutions.² Whether analyzing private or public, non-professional or professional organizations, the existing literature consistently asserts how social factors and not necessarily expertise dictate both directives and an organization's substantive institutional practices.³ Extrapolating to law-giving institutions—most notably the aggregate outputs of the federal judiciary—we believe social structure, and the formal and informal interactions between judicial actors, at least in part, charts the course of doctrinal development. Specifically, if when considering a given legal decision jurists

¹ This chapter was previously published as Daniel Martin Katz & Derek K Stafford, *Hustle and Flow: A Social Network Analysis of the American Federal Judiciary*, 71 OHIO ST. L. J. 457 (2010).

² See, e.g., EMILE DURKHEIM, *THE DIVISION OF LABOR IN SOCIETY* (W.D. Halls trans., The Free Press 1984) (1893); REID HASTIE, STEVEN D. PENROD & NANCY PENNINGTON, *INSIDE THE JURY* (1983) (providing insight into the role of social influence in jury decision making); DAVID KNOKE, *POLITICAL NETWORKS: THE STRUCTURAL PERSPECTIVE* (1990); ARTHUR L. STINCHCOMBE, *SOCIAL STRUCTURE AND ORGANIZATIONS* (1965); Brian Colwell, *Deference or Respect? Status Management Practices Among Prison Inmates*, 70 SOC. PSYCHOL. Q. 442 (2007) (analyzing the social structure of a California prison and determining that social standing among the prisoners derives from interpersonal dynamics); Kenneth A. Frank & Jeffrey Y. Yasumoto, *Linking Action to Social Structure Within a System: Social Capital Within and Between Subgroups*, 104 AM. J. SOC. 642 (1998); David Knoke, *Networks as Political Glue: Explaining Public Policy-Making*, in *SOCIOLOGY AND THE PUBLIC AGENDA* 164–184 (William Julius Wilson ed., 1993); Edward O. Laumann, Peter V. Marsden & Joseph Galaskiewicz, *Community-Elite Influence Structures: Extension of a Network Approach*, 83 AM. J. SOC. 594 (1977); Michael Lounsbury & Marc J. Ventresca, *Social Structure and Organizations Revisited*, in *SOCIAL STRUCTURE AND ORGANIZATIONS REVISITED* 3–38 (Michael Lounsbury & Marc J. Ventresca eds., 2002); Barry Markovsky, David Willer & Travis Patton, *Power Relations in Exchange Networks*, 53 AM. SOC. REV. 220 (1988).

³ Of great interest to the study of legal institutions are the early network-based studies of the medical profession and their subsequent extensions. See generally JAMES S. COLEMAN, ELIHU KATZ & HERBERT MENZEL, *MEDICAL INNOVATION: A DIFFUSION STUDY* (1966) (finding the implementation of new medical technology more closely tracks a network-based upon the social connections between doctors than a network based upon expertise); James Coleman, Elihu Katz & Herbert Menzel, *The Diffusion of an Innovation Among Physicians*, 20 SOCIOMETRY 253 (1957).

either formally or informally consider the views of their colleagues, then properly, conceptualizing the nature and mapping the dynamics of such “peer effects” would appear to be a critical task for public law scholarship.⁴ In other words, if legal outcomes are at least in part socially constituted, then an effort to characterize the relevant social architecture should complement the existing public law literature, perhaps helping to bridge divides among the behavioral, strategic, and historical institutionalist decision making theories.⁵

Of course, acknowledging a role for “judicial peer effects” does not itself produce a social-scientific approach designed to isolate the social linkages between jurists. Prior studies relying upon academic ratings⁶ or citation counts find institutional authority alone does not explain the prestige and influence across judges.⁷ Instead, this literature

⁴ From a game theoretic perspective, this is akin to arguing that the ‘judicial game’ is a game on a graph. While there has been little formal work applying a game or games on graphs approach, a small but growing segment of the public law literature is devoted to more contextual understandings of judicial decision making. See LAWRENCE BAUM, *JUDGES AND THEIR AUDIENCES: A PERSPECTIVE ON JUDICIAL BEHAVIOR* (2006); Charles M. Cameron & Craig P. Cummings, *Diversity and Judicial Decision-Making: Evidence from Affirmative Action in the Federal Courts of Appeals, 1971–1999* (Mar. 30, 2003) (unpublished manuscript, on file with author) (applying a “social economics approach” to the behavior of judges on the U.S. Courts of Appeals). Cameron and Cummings cite a number of studies which taken together “cast considerable doubt on what might be called the traditional political science approach to decision-making on collegial courts.” *Id.*; see, e.g., Sean Farhang & Gregory Wawro, *Institutional Dynamics on the U.S. Court of Appeals: Minority Representation Under Panel Decision Making*, 20 J.L. ECON. & ORG. 299 (2004); Gerald S. Gryski, Eleanor C. Main & William J. Dixon, *Models of State High Court Decision Making in Sex Discrimination Cases*, 48 J. POL. 143 (1986); Richard L. Revesz, *Environmental Regulation, Ideology, and the D.C. Circuit*, 83 VA. L. REV. 1717 (1997); see also Christina L. Boyd, Lee Epstein & Andrew D. Martin, *Untangling the Causal Effects of Sex on Judging* (July 19, 2007) (on file with author), available at <http://ssrn.com/abstract=1001748>.

⁵ For a very brief introduction to some of these approaches, see generally *infra* Part II.A.

⁶ See, e.g., Gregory A. Caldeira, *In the Mirror of the Justices: Sources of Greatness on the Supreme Court*, 10 POL. BEHAV. 247 (1988) (describing the literature using subjective evaluations); see also Rodney L. Mott, *Judicial Influence*, 30 AM. POL. SCI. REV. 295 (1936).

⁷ See, e.g., David Klein & Darby Morrisroe, *The Prestige and Influence of Individual Judges on the U.S. Courts of Appeals*, 28 J. LEGAL STUD. 371 (1999); William M. Landes, Lawrence Lessig & Michael E.

documents great variance in judicial esteem even across judges with equal formal authority. Building on the themes of this largely non-Supreme Court centric scholarship, this study uses network analysis to visualize the social topology of the overall federal judicial branch.

Although network analysts often rely upon survey data to build the connections between actors,⁸ in the context of the federal judiciary, there is significant reason to believe that survey-based network data collected from federal judges would suffer from rampant non-response or other systematic biases. Thus, in order to develop a picture of the social landscape, it is necessary to rely upon a proxy measure for social connectivity. We believe the revealed preferences displayed in the aggregate flow of law clerks between judges reflect a proxy for social and professional esteem.⁹ While not conclusive, the use of this proxy in a network analysis provides an approximate snapshot of the social structure of the federal judiciary.

This study visualizes the traffic of law clerks over the decade-long period of the “natural” Rehnquist Court (1995–2004).¹⁰ As operationalized herein, judges who share

Solimine, *Judicial Influence: A Citation Analysis of Federal Courts of Appeals Judges*, 27 J. LEGAL STUD. 271 (1998); Richard A. Posner, *What Do Judges and Justices Maximize? (The Same Thing Everybody Else Does)*, 3 SUP. CT. ECON. REV. 1 (1993); William G. Ross, *The Ratings Game: Factors That Influence Judicial Reputation*, 79 MARQ. L. REV. 401 (1996).

⁸ See STANLEY WASSERMAN & KATHERINE FAUST, SOCIAL NETWORK ANALYSIS: METHODS AND APPLICATIONS 45–48 (1994) (noting that the questionnaire is the data collection method “most commonly used (especially when actors are people)”).

⁹ For the argument supporting the use of this proxy, see *infra* Parts II.B, II.C.

¹⁰ The “natural Rehnquist Court” is typically defined as the period from 1994–2005 where the composition of judges remained unchanged. To synergize this period with the clerk hiring calendar, our data is restricted to the 1995–2004 time period. For use of the term in another empirical context see, for example, Lori A.

clerks may be both socially connected and highly regarded within the relevant community. Thus, the structural prestige derived from our analysis is not separable into its social and professional components. Of course, it is likely that jurists who are best able to persuade the aggregate institution to support their specific doctrinal vision are those who jointly maximize across the social and professional dimensions.

The precursor to evaluating the policy consequences that a given social structure imposes is an effort to characterize its nature. While we do not directly map doctrinal outputs and only generate a static picture of the landscape, we recognize there is no “pause button” in the external environment. Therefore, reputation effects, esteem, prestige, and influence are undoubtedly generated through dynamic processes that include negative and positive feedback.¹¹ What is needed is a methodology that can capture the richness of this adaptive landscape. Complexity generally, and network analysis more specifically, may help harness this dynamism, thereby allowing for unique insight into the mechanics of social persuasion within the aggregate federal judiciary.

Ringhand, *Judicial Activism: An Empirical Examination of Voting Behavior on the Rehnquist Natural Court*, 24 CONST. COMM. 43 (2007).

¹¹ It is worth emphasizing the consistently changing composition of the aggregate institution. Namely, actors enter and exit the network; thus within the newly constituted social world, their doctrinal legacy may or may not sustain. Although our current effort is not suited to capture notions of legacy, even a casual observer would recognize that although many jurists’ views are quickly forgotten, the views of a selected few persist. Federal judges such as Learned Hand, Jerome Frank, Henry Friendly, and J. Skelly Wright, as well as state supreme court justices such as Cornelius Moynihan, Hans Linde, Roger Traynor, and Stanley Mosk, impose distinctive legacies.

To motivate the use of network analytics, the article begins in Part I with a description of the science of networks as a subset of the larger field of complexity.¹² With homage to Moreno, Milgram, Grannovetter, Watts, and Strogatz as well as others, it describes how network analysis,¹³ the long-standing but recently popularized methodology, allows for the insightful study of a variety of social systems.

¹² While not yet part of the mainstream legal literature, complexity theory has made important contributions to legal scholarship. See, e.g., Barbara A. Cherry, *The Telecommunications Economy and Regulation as Coevolving Complex Adaptive Systems: Implications for Federalism*, 59 FED. COMM. L.J. 369 (2007); Lawrence A. Cunningham, *From Random Walks to Chaotic Crashes: The Linear Genealogy of the Efficient Capital Market Hypothesis*, 62 GEO. WASH. L. REV. 546 (1994); Vincent Di Lorenzo, *Complexity and Legislative Signatures: Lending Discrimination Laws as a Test Case*, 12 J.L. & POL'Y 637 (1996); Daniel A. Farber, *Earthquakes and Tremors in Statutory Interpretation: An Empirical Study of the Dynamics of Interpretation*, 89 MINN. L. REV. 848 (2005); Greg Todd Jones, *Dynamical Jurisprudence: Law as a Complex System*, 24 GA. ST. L. REV. 873 (2008); David G. Post & Michael B. Eisen, *How Long is the Coastline of the Law? Thoughts on the Fractal Nature of Legal Systems*, 29 J. LEGAL STUD. 545 (2000); Mark J. Roe, *Chaos and Evolution in Law and Economics*, 109 HARV. L. REV. 641 (1996); J.B. Ruhl, *The Fitness of Law: Using Complexity Theory to Describe the Evolution of Law and Society and Its Practical Meaning for Democracy*, 49 VAND. L. REV. 1407 (1996); J.B. Ruhl, *Law's Complexity: A Primer*, 24 GA. ST. U. L. REV. 885 (2008); J.B. Ruhl, *Regulation by Adaptive Management—Is It Possible?*, 7 MINN. J. L. SCI. & TECH. 21 (2005); Daniel F. Spulber & Christopher S. Yoo, *On the Regulation of Networks as Complex Systems: A Graph Theory Approach*, 99 NW. U. L. REV. 1687 (2005); Bernard Trujillo, *Patterns in a Complex System: An Empirical Study of Valuation in Business Bankruptcy Cases*, 53 UCLA L. REV. 357 (2005); For an extensive list of scholarship, see J.B. Ruhl, *Complex Adaptive Systems Literature for Law and Social Sciences*, <http://law.vanderbilt.edu/seal/resources/readingscomplex.htm> (last visited Jan. 11, 2010).

¹³ Formal network analysis—or invocation of its core concepts—has recently been witnessed within legal, social science, and physics literatures. See, e.g., Frank B. Cross, Thomas A. Smith & Antonio Tomarchio, *The Reagan Revolution in the Network of Law*, 57 EMORY L. J. 1227 (2008); James H. Fowler & Sangick Jeon, *The Authority of Supreme Court Precedent*, 30 SOC. NETWORKS 16 (2008); James H. Fowler et al., *Network Analysis and the Law: Measuring the Legal Importance of Precedents at the U.S. Supreme Court*, 15 POL. ANALYSIS 324 (2007); Daniel M. Katz, Derek K. Stafford & Eric Provins, *Social Architecture, Judicial Peer Effects and the “Evolution” of the Law: Toward a Positive Theory of Judicial Social Structure*, 24 GA. ST. U. L. REV. 977 (2008); E. A. Leicht et al., *Large-Scale Structure of Time Evolving Citation Networks*, 59 EUR. PHYSICAL J. B 75 (2007); Anthony Paik, Ann Southworth & John P. Heinz, *Lawyers of the Right: Networks and Organization*, 32 LAW & SOC. INQUIRY 883 (2007); Thomas A. Smith, *The Web of Law*, 44 SAN DIEGO L. REV. 309 (2007); Katherine J. Strandburg et al., *Law and the Science of Networks: An Overview and an Application to the “Patent Explosion,”* 21 BERKELEY TECH. L.J. 1293 (2006); David J. Walsh, *On the Meaning and Pattern of Legal Citations: Evidence from State Wrongful Discharge Precedent Cases*, 31 L. & SOC'Y REV. 337 (1997); Frank B. Cross, Thomas A. Smith

In an effort to justify the use of law clerk traffic as a proxy for social connectivity, Part II of this Article reviews two major strains of the extant legal literature. After briefly introducing the larger field of public law, it demonstrates how the behavior of actors within the law clerk market might, in part, help reveal the social structure of the federal judiciary. Concepts such as social influence are fairly difficult to operationalize and, in response, scholars have developed an array of diverse approaches to consider such questions.¹⁴ We believe that a promising addition to the literature would be a graph theoretic approach. Specifically, notwithstanding any allocative inefficiencies present in the judicial law clerk market, it is highly probable that, in the aggregate, judicial reputation significantly affects the matching of law clerks with their employers. Thus, as applied to the marriage of these two literatures, the network analysis advanced here relies upon the displayed preferences of both judges and clerks, embedded within law clerk traffic, to provide a partial picture of the institution’s aggregate topology.

Part III represents this Article’s core contribution. It begins with a description of the significant data collection effort undertaken to support our findings. Our research team collected available information for every federal judicial law clerk employed by an Article III judge¹⁵ during the full term of the “natural” Rehnquist Court (1995–2004). Holding the United States Supreme Court constant and drawing from a base of nearly

& Antonio Tomarchio, *Determinants of Cohesion in the Supreme Court’s Network of Precedents* (Aug. 14, 2006), available at <http://ssrn.com/abstract=924110>.

¹⁴ For a discussion of these approaches, see *infra* Part II.A.

¹⁵ As available clerk information for Senior Status Judges is far less extensive, we choose to omit Senior Status Judges from this study.

19,000 clerk events,¹⁶ Part III provides a series of visualizations and corresponding network statistics. Such statistics are critical because they help identify critical actors and illuminate the class of generating processes that are likely responsible for the observed network. For example, we hypothesize that a process of preferential attachment, similar to that described by physicists Barabási and Albert, likely generates the federal judicial social network.¹⁷

Part IV provides some concluding thoughts about emergence, convergence, peer effects, and legal change in the federal judicial hierarchy. Although our effort is first-order, the structure of the network visualized herein provides significant insight into how the local actions of a series of micro-motivated judicial actors maps to the judiciary's macro-jurisprudential outputs.¹⁸

PART I. THE SCIENCE OF NETWORKS: FROM MORENO TO MILGRAM TO WATTS AND STROGATZ AND BEYOND

Built upon the combination of linear algebra, graph theory, and traditional statistical approaches, network analysis should help illuminate the social structure of the federal judiciary. Using *nodes* to represent actors and *ties* to represent relations between actors, network analysis differs from traditional statistical models as it attempts to determine not only properties of an individual's relationships to his or her peers, but also the larger

¹⁶ Hereinafter, a "clerk event" is defined as a given clerk employed by an individual judge for a given year. For example, a clerk hired for a two-year interval constitutes two clerk events. A permanent clerk employed for k years would have k law clerk events.

¹⁷ As described *infra* Part III, we lack the necessary evidence to definitively characterize the generative process. Based upon the currently available quantitative and qualitative evidence, we believe a process akin to Barabási and Albert's preferential attachment represents a good working hypothesis.

¹⁸ See generally THOMAS C. SCHELLING, *MICROMOTIVES AND MACROBEHAVIOR* (1978).

social structure in which that individual operates.¹⁹ As the techniques of network science and complex systems are often unfamiliar, we proceed with a broad introduction to both fields. Such an introduction should motivate our larger project of building a picture of the social landscape using the information embedded in the law clerk labor market.

A. Emergence in a Broad Class of Complex Systems Models

Network analysis is a disciplined scientific approach used to understand the interactions between agents in a complex system.²⁰ Although the definition of a “complex system” is awkward and can seem nebulous, nearly all definitions would specify that the system must exhibit *emergent* behavior.²¹ Traditionally, systems display emergence when the micro-study of individual actors in a given system yields incomplete information about the entirety of the organization.²² Instead, interactions between the components, at

¹⁹ See WASSERMAN & FAUST, *supra* note 7, at 17–21.

²⁰ Drawn from core concepts developed within the academy, a host of recent literature has popularized the study of network analysis. The devotion of the ninetieth anniversary of Forbes magazine to network analysis is one of many indications that this is a renaissance period for the science of networks. See Tom Post, *The Power of Networks*, FORBES, May 7, 2007, at 49 (devoting its ninetieth anniversary issue to the “new” age of networks). For a non-exhaustive list of recent popular books in the subject, see ALBERT-LÁSZLÓ BARABÁSI, *LINKED: THE NEW SCIENCE OF NETWORKS* (2002); MARK BUCHANAN, *NEXUS: SMALL WORLDS AND THE GROUNDBREAKING SCIENCE OF NETWORKS* (2002); MALCOLM GLADWELL, *THE TIPPING POINT: HOW LITTLE THINGS CAN MAKE A BIG DIFFERENCE* (2000); DUNCAN J. WATTS, *SIX DEGREES: THE SCIENCE OF A CONNECTED AGE* (2003).

²¹ For more detailed discussion of emergence including applications to a variety of disciplines, see generally JOHN H. HOLLAND, *EMERGENCE: FROM CHAOS TO ORDER* (1998); STEPHEN WOLFRAM, *A NEW KIND OF SCIENCE* (2002); David J. Chalmers, *Strong and Weak Emergence*, in *THE RE-EMERGENCE OF EMERGENCE: THE EMERGENTIST HYPOTHESIS FROM SCIENCE TO RELIGION* 245 (Philip Clayton & Paul Davies eds., 2006); Tom De Wolf & Tom Holvoet, *Emergence Versus Self-Organisation: Different Concepts but Promising When Combined*, in *ENGINEERING SELF-ORGANISING SYSTEMS: METHODOLOGIES AND APPLICATIONS 1* (Sven A. Brueckner et al. eds., 2005).

²² See generally HOLLAND, *supra* note 20. De Wolf and Holvoet provide a more detailed working definition of emergence. They argue that “[a] system exhibits emergence when there are coherent emergents at the

least in part, structure the outputs of the system.²³ As Peter Corning describes, “[a]mong other things, complexity theory gave mathematical legitimacy to the idea that processes involving the interactions among many parts may be at once deterministic yet for various reasons unpredictable.”²⁴

Common examples of emergence include the study of ecosystems where order emerges from the interspecies interactions. Emergent systems do not necessarily have logical or deterministic properties. Thus, their outputs cannot always be deduced or predicted. Consider H₂O phase transitions. Water boils and freezes at very specific temperatures under controlled conditions, but nothing about the change in temperatures affects the actual water molecules.²⁵ At precisely 100°C and 0°C the molecules begin to interact differently; and thus, from liquid, new macro-worlds of solid ice and water vapor

macro-level that dynamically arise from the interactions between the parts at the micro-level. Such emergents are novel w.r.t. the individual parts of the system.” See De Wolf & Holvoet, *supra* note 20, at 3.

²³ For an illuminating discussion of emergence and its historical origin, see Peter A. Corning, *The Re-Emergence of “Emergence”: A Venerable Concept in Search of a Theory*, 7 COMPLEXITY 18–19 (2002); see also BRIAN GOODWIN, HOW THE LEOPARD CHANGED ITS SPOTS: THE EVOLUTION OF COMPLEXITY (1994); STEVEN JOHNSON, EMERGENCE: THE CONNECTED LIVES OF ANTS, BRAINS, CITIES, AND SOFTWARE (2001). The last decade witnessed the creation of an academic journal devoted to exploring the concepts of emergence. See generally EMERGENCE, <http://emergence.org/index.html> (last visited Jan. 13, 2010).

²⁴ See Corning, *supra* note 22, at 21. There is not a uniform agreement regarding the appropriate definition of emergence. See JOSHUA M. EPSTEIN & ROBERT AXTELL, GROWING ARTIFICIAL SOCIETIES: SOCIAL SCIENCE FROM THE BOTTOM UP 35 (1996) (defining emergent phenomena to be “stable macroscopic patterns arising from the local interactions of agents.”) (emphasis omitted). Outlining a variety of rationales including the anti-scientific history of British emergentism, Professor Epstein offers deep concerns regarding its continued use in the field of complex systems. See Joshua M. Epstein, *Agent-Based Computational Models and Generative Social Science*, in GENERATIVE SOCIAL SCIENCE 31–37 (2006). While we do not take a pass on its continued use, we recognize the merit of Professor Epstein’s argument.

²⁵ See, e.g., PIERRE PAPON, JACQUES LEBLOND & PAUL H. E. MEIJER, THE PHYSICS OF PHASE TRANSITIONS: CONCEPTS AND APPLICATIONS 1 (S.L. Schnur trans., Springer-Verlag Berlin Heidelberg 2d ed. 2006).

emerge.²⁶ An extensive study of the chemical characteristics between these moments of transition would not predict the discontinuity that occurs at these threshold points.

Automobile traffic is another example of a complex system.²⁷ To characterize the global properties of a traffic system, one could code a set of individual-level variables, including the horsepower of the respective vehicles, the disposition of the drivers, and a host of decisional rules employed by the driver, including the leave space and a driver's ideal speed and lane. Even with an understanding of all of these properties, it is ultimately the interactions between actors that structure outputs for the overall system. Whether flow or bottleneck will emerge is a function of the intermingling of individuals, each of whom possesses a host of these attributes and decisional rules. Thus, it depends upon the precise spatial distribution of agents and the nature of their local interactions.

Returning to the matter of inquiry, the federal judiciary exhibits behavior that might be considered emergent. While a judge in a given case may rule in isolation of other judges, jurists generally do not exist in a state of complete social and professional isolation from their peers. The socialization and training of the legal community occurs through various repeated interactions with one's current or future peers at moments and

²⁶ See Corning, *supra* note 22, at 24.

²⁷ There exists a broad host of scholarship modeling the dynamics of traffic. For a cursory sample, see Ofer Biham, Alan Middleton & Dov Levine, *Self-Organization and a Dynamical Transition in Traffic-Flow Models*, 46 PHYSICAL REV. A 6124 (1992); Debashish Chowdhury, Ludger Santen & Andreas Schadschneider, *Statistical Physics of Vehicular Traffic and Some Related Systems*, 329 PHYSICS REP. 199 (2000); Henryk Fukś & Nino Boccara, *Generalized Deterministic Traffic Rules*, 9 INT'L J. MODERN PHYSICS C 1 (1998); Kai Nagel & Michael Schreckenberg, *A Cellular Automaton Model for Freeway Traffic*, 2 J. DE PHYSIQUE 2221 (1992); Shin-ichi Tadaki & Macoto Kikuchi, *Jam Phases in a Two-Dimensional Cellular-Automaton Model of Traffic Flow*, 50 PHYSICAL REV. E 4564 (1994).

places throughout the hierarchy.²⁸ In some cases, social interactions begin in law school²⁹ and in others they begin even sooner. Accordingly, if judicial perceptions and outcomes are at least, in part, the by-product of these interactions, then larger interpretative frames, themselves the aggregation of various individual decisions, assuredly are emergent. As such, the federal judiciary is a “complex system” and would benefit from methodologies reserved for the study of complexity.

B. A Brief Introduction to Social Network Analysis

One method of studying a complex system is network analysis, an approach which maps the aggregate topology by quantifying the local interactions between agents.³⁰ In the early twentieth century, researchers such as Jacob Moreno used network analysis to compile sociograms that diagramed social relationships and identified individuals who held structural positions that were indicative of leadership.³¹ Following this early work, Stanley Milgram did much to advance the popularity of network analysis. Through his study of communal relationships in society in the 1960s, the “small worlds” or “six degrees of separation” conception entered the popular lexicon.³² In his experiment, Milgram sent letters to a sample of people in Kansas and Nebraska and asked the subjects if they would attempt to send these letters to a stockbroker in Boston, Massachusetts.³³ On average, the letters who reached the target only passed through the hands of 6.5

²⁸ See, e.g., DUNCAN E. KENNEDY, *LEGAL EDUCATION AND THE REPRODUCTION OF HIERARCHY: A POLEMIC AGAINST THE SYSTEM* (1983).

²⁹ See ELIZABETH MERTZ, *THE LANGUAGE OF LAW SCHOOL: LEARNING TO “THINK LIKE A LAWYER”* 210 (2007) (citing Christa McGill, *Producing Lawyers: Institutional Hierarchy and the Social Structure of Law Schools* (2002) (unpublished Ph.D. dissertation, Duke University)).

people, and thus Milgram argued that the social world was quite small, with only six degrees of separation between a random selection of people.³⁴

The logic supporting the original Milgram experiment was fairly straightforward. If every individual each knows 150 people and each of those 150 people know 150 others, the size of the network exceeds the total world population before the sixth order of magnitude. Such a hypothesized network, however, was a random network where the interrelations between an individual's second-degree friends were not explicitly modeled. In subsequent work, Mark Granovetter argued that world social connections do not

³⁰ The origins of network science are closely linked to the development of graph theory. Leonhard Euler, whose major contributions include the first theorem in graph theory, developed his work in an effort to solve the Königsberg Bridge Problem. In reduced form, the Königsberg Bridge Problem asks whether it is possible to traverse the town of Königsberg, while both crossing each of its seven bridges only once and closing the circuit by returning to one's point of origin. Euler demonstrated this was not possible. With reference to the Königsberg Bridge Problem, mathematicians ask whether "there exists any *Eulerian path* on the network." See THE STRUCTURE AND DYNAMICS OF NETWORKS 2 (Mark Newman, Albert-László Barabási & Duncan J. Watts eds., 2006). For more on the life and work of Leonhard Euler, see C. EDWARD SANDIFER, THE EARLY MATHEMATICS OF LEONHARD EULER (2007). For more information on graph theory, see, for example, GARY CHARTRAND, INTRODUCTORY GRAPH THEORY (1977) and FRANK HARARY, GRAPH THEORY (1969).

³¹ It is hard to understate the contribution of Jacob Moreno to the development of social network analysis. Along with Kurt Lewin and Fritz Heider, the first half of the twentieth century witnessed dramatic developments in the science of networks. For example, Moreno developed the "sociogram," an apparatus that allows social relationships to be drawn using analytic geometry. See J. L. MORENO, WHO SHALL SURVIVE? A NEW APPROACH TO THE PROBLEM OF HUMAN INTERRELATIONS 86, 153 (1934). Kurt Lewin extended Moreno's work, arguing that the structural properties of social space could be uncovered using a host of mathematical techniques including graph theory, topology, and set theory. See, e.g., KURT LEWIN, FIELD THEORY IN SOCIAL SCIENCE: SELECTED THEORETICAL PAPERS 64, 92 (Dorwin Cartwright ed., 1951).

³² See Stanley Milgram, *The Small-World Problem*, 1 PSYCHOL. TODAY 61 (1967). Milgram is often credited with coining "six degrees of separation." However, many attribute the term to a Hungarian author, Frigyes Karinthy, whose volume of short stories, *Everything Is Different*, invoked such concepts.

³³ Milgram, however, did not provide the subjects with the address of the stockbroker; he instead insisted individuals send the letter to someone they thought would be socially closer to the man in Boston. See Milgram, *supra* note 31, at 64.

³⁴ See *id.* at 65; see also Charles Korte & Stanley Milgram, *Acquaintance Networks Between Racial Groups: Application of the Small World Method*, 15 J. PERSONALITY & SOC. PSYCHOL. 101 (1970) (replicating the small world experiment between different racial groups); Jeffrey Travers & Stanley Milgram, *An Experimental Study of the Small World Problem*, 32 SOCIOMETRY 425, 428 (1969) (varying the starting populations and providing "a first technical report on the small world method").

emerge randomly.³⁵ People cluster and organize in cliques; thus, if two people are strong friends the likelihood that they have shared friends is fairly high.³⁶ This commonality between connections of people in similar groupings would not allow the macro-network to exhibit the exponential growth suggested by Milgram's theory. Since Milgram's experiment and subsequent replications³⁷ still demonstrated a "small world," Granovetter worked to develop an alternative causal account that would sustain the empirical phenomena. He noticed the weaker the ties between individuals the more likely those connections would not coincide. Hence, these weak ties maintained the small-world characteristics observed by Milgram. Accordingly, Granovetter supplemented Milgram's work by categorizing the connections between individuals by the strength of those bonds, while also placing more realistic restraints on Milgram's random networks.

Following on these themes of prior scholars, the latest wave of network science is attributable to a host of scholars in the physical sciences including Watts and Strogatz³⁸

³⁵ Mark S. Granovetter, *The Strength of Weak Ties*, 78 AM. J. SOC. 1360 (1973).

³⁶ *Id.* at 1362. Granovetter did not argue that this empirical fact completely undercut widespread connectivity; rather, he argued only that widespread societal links are an artifact of one's weak connections. *Id.* at 1378. In his seminal article *The Strength of Weak Ties*, Granovetter provided an addendum to Milgram's theory. *See generally id.* *See also* Mark Granovetter, *The Strength of Weak Ties: A Network Theory Revisited*, 1 SOC. THEORY 201 (1983). Granovetter understood that if Person A was close friends with Persons B and C, then Persons B and C were also likely friends with one another. *See* Granovetter, *supra* note 34, at 1362. Accordingly, the stronger the bonds between individuals, the more likely their first degree nodes are also connected. In network analysis, this is known as balance theory. *See* Fritz Heider, *Attitudes and Cognitive Organization*, 21 J. PSYCHOL. 107, 107 (1946) (asserting in part the idea of balance); *see also* WASSERMAN & FAUST, *supra* note 7, at 220–32.

³⁷ *See* Korte & Milgram, *supra* note 33; Travers & Milgram, *supra* note 33.

³⁸ *See* Duncan J. Watts & Steven H. Strogatz, *Collective Dynamics of 'Small-World' Networks*, 393 NATURE 440 (1998).

as well as Barabási and Albert.³⁹ Motivated by the organizational behavior of a certain species of fireflies in Southeast Asia, Watts and Strogatz demonstrated how a relatively small amount of random wiring can allow a network simultaneously to hold the small world properties hypothesized by Milgram and the high clustering described by Granovetter.⁴⁰ Apparently, fireflies in this region have the rather unusual habit of flashing in unison.⁴¹ However, neurological analysis of the fireflies indicated that they should not have the mental faculty necessary to coordinate this effort. Although the fireflies may take cues from their neighbors, this alone was not enough to generate the witnessed behavior. Namely, in the early evening, witnesses commonly observe one firefly light and then another. Suddenly, groups of fireflies flash. Finally, concentrations of hundreds of fireflies on the same tree synchronize their flashes in unison.

In the initial moments at dusk when the fireflies are randomly flashing, these uncoordinated flashes could be considered possible offerings of timing. Think of applause in an auditorium.⁴² Since only one sequence ultimately emerges, it is important

³⁹ See Albert-László Barabási & Réka Albert, *Emergence of Scaling in Random Networks*, 286 *SCIENCE* 509 (1999); see also Réka Albert & Albert-László Barabási, *Statistical Mechanics of Complex Networks*, 74 *REVS. OF MODERN PHYSICS* 47 (2002). Although outside the scope of this article, it is worth noting that network science has also developed a variety of models of network evolution. For example, Professor Smith introduces legal scholars to the Bose-Einstein condensation (BEC) approach to studying the evolution of networks where nodes are permitted to possess differential levels of fitness. See Smith, *supra* note 12, at 322–23 (citing Ginestra Bianconi & Albert-László Barabási, *Bose-Einstein Condensation in Complex Networks*, 86 *PHYSICAL REV. LETTERS* 5632 (2001)); see also Alain Barrat, Marc Barthélemy & Alessandro Vespignani, *Weighted Evolving Networks: Coupling Topology and Weight Dynamics*, 92 *PHYSICAL REV. LETTERS* 228701-1 (2004).

⁴⁰ See Watts & Strogatz, *supra* note 37, at 440.

⁴¹ See, e.g., STEVEN STROGATZ, *SYNC: THE EMERGING SCIENCE OF SPONTANEOUS ORDER* 11 (2003).

⁴² See, e.g., John H. Miller & Scott E. Page, *The Standing Ovation Problem*, 9 *COMPLEXITY* 8 (2004).

to understand how the landscape moves from divergence to convergence, from randomness to some sense of relative order.⁴³

Watts and Strogatz used computational models to simulate the fireflies' flashing based upon different rules about how the insects could react to cues from their neighbors. However, the initial simulations failed to reproduce the simultaneous flashing. Even with near immediate reaction time to the fireflies in close proximity, the overall pattern was still too protracted. Thus, Watts and Strogatz added one more component to their model: they gave a small proportion of fireflies the ability to see and thus react to a random firefly. This simulation worked in an egalitarian network because each of the dyads⁴⁴ is relatively equal in its number of connections but with a select few connections across great distances. This approach reflected a successful replication and provided an explanation for the observed empirical phenomena.

Extrapolating from the fireflies and returning to the social world, there are many phenomena that display similar properties. In reduced form, a cascade is essentially emergent behavior upon which there is enough initial convergence by certain actors to see it take hold. Depending upon the orientation of the relevant landscape, it is possible to generate a cascade using a small number of structurally important or prestigious actors. Existing network statistics are designed to identify such critical actors. Ultimately, these network statistics are only as reliable as the interactions they attempt to represent.

⁴³ *Id.*

⁴⁴ While mathematicians might provide a more formal definition of the dyad, involving vectors, tensors and vector space, it can loosely be considered as two individuals or units considered as a pair.

Developing appropriate connections between nodes is the critical step in the analysis.

Thus, in Part II we devote significant attention to describing our measure of connectivity.

II. DEVELOPING A PROXY FOR THE SOCIAL LANDSCAPE: THE PUBLIC LAW AND CLERKS MARKET LITERATURES

Among the immense public law literature analyzing the operation of the American Federal Judiciary are two important strands that together with the greater body of available work advance our understanding of the operation of this important political institution. The first line of scholarship considers the relative prestige and influence of various judges and Justices.⁴⁵ Specifically, as a variety of commentators note, the views of some courts and some jurists seem to be uniquely privileged while others are not nearly as well-regarded.⁴⁶ In order to understand the impact this empirical fact imposes upon the legal landscape, the literature has been consumed with innovative methods to help adjudicate questions of relative esteem.⁴⁷ However, regardless of the approach employed and any methodological disagreements, virtually all scholarship finds significant variance in prestige across jurists.

⁴⁵ See, e.g., RICHARD A. POSNER, *CARDOZO: A STUDY IN REPUTATION* 74–91 (1990); Klein & Morrisroe, *supra* note 6; Montgomery Kosma, *Measuring the Influence of Supreme Court Justices*, 27 J. LEGAL STUD. 333 (1998); Landes, Lessig & Solimine, *supra* note 6.

⁴⁶ See sources cited *supra* note 44. For a study using an entire court as the unit of analysis, see Michael E. Solimine, *Judicial Stratification and the Reputations of the United States Courts of Appeals*, 32 FLA. ST. U. L. REV. 1331 (2005).

⁴⁷ Solimine, *supra* note 45, at 1343–50. Professor Solimine provides a very detailed description of the various approaches used to consider the question. Discussing the existing studies, he notes “[r]eputation is a difficult subject to objectively study. Couple that with the snapshot quality of most of the studies; they usually cover a relatively short period of time or only samples of the judges who constitute a circuit.” *Id.* at 1350.

Also under the large umbrella of the public law literature is a largely different group of individuals who devote attention to the study of federal law clerks.⁴⁸ This “clerks” scholarship includes analysis of the process governing their selection as well as their impact upon judicial outputs. At first glance, this strain of scholarship might appear wholly unrelated to the question of relative prestige and influence. However, a careful review counsels otherwise. There is important information regarding judicial reputation embedded within the market for judicial law clerks. Namely, despite any existing allocative inefficiencies in the clerk market, clerks more or less seek to work for the most prestigious judges and judges seek the “best” clerks. While not conclusive, we believe the movement of law clerks provides a significant observable measure of the social and professional linkages between jurists. Later, we will explicitly develop this link—but first, we provide introduction to both literatures.

From Qualitative Supreme Court Studies to Decision Making in a Hierarchal Federal Judiciary

Throughout its long history, the judicial politics subfield has embraced a variety of substantive questions and methodological approaches. Early work in the subfield emphasized the decision making of the United States Supreme Court and privileged the use of qualitative methods. However, these approaches were largely jettisoned as the rise of behavioralism ushered in the use of quantitative models across a variety of intellectual domains. Following their prior embrace by allied disciplines, large N empirical

⁴⁸ See *infra* Part II.B.

approaches were initially adopted in neighboring political science subfields such as legislative politics⁴⁹ and political participation.⁵⁰

Public law behavioralism is epitomized by *The Attitudinal Model*, in which Professors Segal and Spaeth derive judicial preferences through attention to the objective voting behavior of members of the United States Supreme Court.⁵¹ Analyzing aggregate voting data, attitudinalists argue Justices vote in a manner to maximize their individual partisan policy preferences. Thus, in broad stroke their model asserts “Rehnquist votes the way he does because he is extremely conservative; Marshall voted the way he did because he is extremely liberal.”⁵² While a significant amount of the current scholarship still embraces behavioral studies of the High Court, recent years witnessed the increasing use of

⁴⁹ In legislative politics, for example, many studies embracing the behavioralist paradigm use outputs, in this case roll call votes of members of Congress to characterize and predict legislative behavior. Suffice to say, the literature is vast. See, e.g., RICHARD L. HALL, PARTICIPATION IN CONGRESS (1996); Christopher Achen, *Measuring Representation*, 22 AM. J. POL. SCI. 475 (1978); John E. Jackson & John W. Kingdon, *Ideology, Interest Group Scores, and Legislative Votes*, 80 AM. J. POL. SCI. 805 (1992); Keith Krehbiel, *Where’s the Party?*, 23 BRIT. J. POL. SCI. 235 (1993); Keith T. Poole & R. Steven Daniels, *Ideology, Party, and Voting in the U.S. Congress, 1959–1980*, 79 AM. POL. SCI. REV. 373 (1985).

⁵⁰ See, e.g., ANGUS CAMPBELL ET AL., THE AMERICAN VOTER (1960); SIDNEY VERBA & NORMAN H. NIE, PARTICIPATION IN AMERICA: POLITICAL DEMOCRACY AND SOCIAL EQUALITY (1972); RAYMOND E. WOLFINGER & STEVEN J. ROSENSTONE, WHO VOTES? (1980); Paul R. Abramson & John H. Aldrich, *The Decline of Electoral Participation in America*, 76 AM. POL. SCI. REV. 502 (1982).

⁵¹ See JEFFREY A. SEGAL & HAROLD J. SPAETH, THE SUPREME COURT AND THE ATTITUDINAL MODEL (1993). For a discussion of early behavioral work in the judicial politics subfield, see generally NANCY MAVEETY, THE PIONEERS OF JUDICIAL BEHAVIOR (2003). Behavioralism generally and attitudinalism more specifically have been criticized by other scholars. For a sample of critiques of the attitudinal model, see, for example, LAWRENCE BAUM, THE PUZZLE OF JUDICIAL BEHAVIOR (1997); FORREST MALTZMAN, JAMES F. SPRIGGS & PAUL J. WAHLBECK, CRAFTING LAW ON THE SUPREME COURT: THE COLLEGIAL GAME (2000); Richard A. Brisbin, Jr., *Slaying the Dragon: Segal, Spaeth and the Function of the Law in Supreme Court Decision Making*, 40 AM. J. POL. SCI. 1004 (1996); Howard Gillman & Cornell W. Clayton, *Beyond Judicial Attitudes: Institutional Approaches to Supreme Court Decision-Making*, in SUPREME COURT DECISION-MAKING: NEW INSTITUTIONALIST APPROACHES (Howard Gillman & Cornell Clayton eds., 2001). For a discussion of the misuse of the Spaeth dataset, see Carolyn Shapiro, *Coding Complexity: Bringing Law to the Empirical Analysis of the Supreme Court*, 60 HASTINGS L.J. 477 (2009).

⁵² See SEGAL & SPAETH, *supra* note 50, at 65.

alternative methods as well as the study of other judicial actors. For example, the past two decades saw the rise of a variety of neo-institutional decision making theories,⁵³ as well as extensive study of the decision making of the state supreme courts⁵⁴ and the lower federal courts.⁵⁵

⁵³ See, e.g., SUPREME COURT DECISION-MAKING: NEW INSTITUTIONALIST APPROACHES (Cornell W. Clayton & Howard Gillman eds., 1998); LEE EPSTEIN & JACK KNIGHT, THE CHOICES JUSTICES MAKE (1998); MALTZMAN, SPRIGGS & WAHLBECK, *supra* note 50; Rogers Smith, *Political Jurisprudence, the 'New Institutionalism,' and the Future of Public Law*, 82 AM. POL. SCI. REV. 89 (1988) (previewing some of the future developments in the public law field). It is important to note how institutional theories take a variety of flavors, including strategic institutionalism and historical institutionalism. Furthermore, the methods employed by these respective camps range from formal theory to qualitative historical methods. For an attempt to use qualitative historical methods to support a strategic account, see Daniel M. Katz, *Institutional Rules, Strategic Behavior, and the Legacy of Chief Justice William Rehnquist: Setting the Record Straight on Dickerson v. United States*, 22 J.L. & POL. 303 (2006).

⁵⁴ See, e.g., Paul Brace, Melinda Gann Hall & Laura Langer, *Placing State Supreme Courts in State Politics*, 1 ST. POL. & POL'Y Q. 81 (2001); Paul Brace, Laura Langer & Melinda Gann Hall, *Measuring the Preferences of State Supreme Court Judges*, 62 J. POL. 387 (2000); Gregory A. Caldeira, *The Transmission of Legal Precedent: A Study of State Supreme Courts*, 79 AM. POL. SCI. REV. 178 (1985); Lawrence M. Friedman et al., *State Supreme Courts: A Century of Style and Citation*, 33 STAN. L. REV. 773 (1981); Melinda Gann Hall, *Electoral Politics and Strategic Voting in State Supreme Courts*, 54 J. POL. 427 (1992); F. Andrew Hanssen, *Learning About Judicial Independence: Institutional Change in the State Courts*, 33 J. LEGAL STUD. 431 (2004); Donald R. Songer & Kelley A. Crews-Meyer, *Does Judge Gender Matter? Decision Making in State Supreme Courts*, 81 SOC. SCI. Q. 750 (2000).

⁵⁵ While there certainly exists important early work on lower courts, recent years witnessed a substantial amount of high quality scholarship on lower courts. See, e.g., VIRGINIA HETTINGER, STEFANIE LINDQUIST & WENDY MARTINEK, *JUDGING ON A COLLEGIAL COURT: INFLUENCES ON FEDERAL APPELLATE COURT DECISION MAKING* (2006); DAVID E. KLEIN, *MAKING LAW IN THE UNITED STATES COURTS OF APPEALS* (2002); DONALD R. SONGER, REGINALD S. SHEEHAN & SUSAN B. HAIRE, *CONTINUITY AND CHANGE ON THE UNITED STATES COURTS OF APPEALS* (2000); Charles M. Cameron, Jeffrey A. Segal & Donald Songer, *Strategic Auditing in a Political Hierarchy: An Informational Model of the Supreme Court's Certiorari Decisions*, 94 AM. POL. SCI. REV. 101 (2000); Frank Cross, *Appellate Court Adherence to Precedent*, 2 J. EMPIRICAL LEGAL STUD. 369 (2005); Frank Cross & Emerson Tiller, *Judicial Partisanship and Obedience to Legal Doctrine: Whistleblowing on the Federal Courts of Appeals*, 107 YALE L.J. 2155 (1998); Susan B. Haire, Stefanie A. Lindquist & Donald R. Songer, *Appellate Court Supervision in the Federal Judiciary: A Hierarchical Perspective*, 37 L. & SOC'Y REV. 143 (2002); Donald R. Songer, Jeffrey A. Segal & Charles M. Cameron, *The Hierarchy of Justice: Testing a Principal-Agent Model of Supreme Court-Circuit Court Interactions*, 38 AM. J. POL. SCI. 673 (1994).

This recent work is important as both the industrial organization of the Judicial Branch and its norms and variant institutional rules undoubtedly exert influence upon its final outcomes. With the wide variety of actors and institutions, the precise trajectory of American common law is difficult, if not impossible, to predict, as a host of interactive parameters, including legal doctrine and partisanship, work to shape the path of American jurisprudence. Yet, the increasing nuance and diversity⁵⁶ of the judicial politics literature certainly brings scholars closer to understanding the complicated landscape in which judicial decision making is undertaken.

In addition to all of the aforementioned decisional factors, judicial “peer effects” are one additional element that received recent study.⁵⁷ Of course, it is hardly new or novel to assert that, in general terms, maintaining high status among one’s peers as well as sustaining relationships with one’s close colleagues might, together with other factors, impact an individual’s decision calculus. Legal formalists, however, long denied such influence, instead arguing judicial decision making was the by-product of the technocratic application of neutral legal principles. With respect to crafting law, a number of important scholars assert a strong role for social factors. Consider Judge Posner’s book *Overcoming Law*, where he identifies a host of variables that together define the judicial

⁵⁶ The “logic of diversity” invoked herein is drawn from the work of Scott Page. See SCOTT PAGE, *THE DIFFERENCE: HOW THE POWER OF DIVERSITY CREATES BETTER FIRMS, SCHOOLS, AND SOCIETIES* (2007) (explaining the conditions under which diversity can create better public and private institutions).

⁵⁷ See, e.g., Cameron & Cummings, *supra* note 3.

utility function.⁵⁸ Among these core parameters, Judge Posner argues that a judge's reputation among his or her fellow judges affects the types of judicial outputs he or she would be willing to support.⁵⁹

Reputational effects are difficult to operationalize. However, this has not prevented scholars from developing methodological approaches to measure the relative prestige and influence of federal judicial actors.⁶⁰ While early work on prestige relied upon ratings by academics and other court observers,⁶¹ recent efforts use more objective measures to gain leverage on such questions. For example, Landes, Lessig, and Solimine operationalize prestige using the total citations to opinions produced by a given judge.⁶² These scholars support the use of this proxy for prestige and influence by arguing that judges who garner high citation counts do so because their brethren either hold them in high regard or otherwise feel some social obligation to cite the opinion of their close colleague.⁶³

⁵⁸ See RICHARD A. POSNER, *OVERCOMING LAW* (1995). The chapter on the judicial utility function is based upon important earlier work. See Posner, *supra* note 6.

⁵⁹ See POSNER, *supra* note 57, at 119; see also LAWRENCE BAUM, *JUDGES AND THEIR AUDIENCES: A PERSPECTIVE ON JUDICIAL BEHAVIOR* (2006); Jason Whitehead, *Cynics and Rogues: How “Bad” Judges Can Help Us Better Understand the Rule of Law* (2008) (unpublished manuscript on file with authors) (offering qualitative evidence that judges consider the views of other judges when rendering their decisions).

⁶⁰ Although largely focused upon the entire circuit, for a helpful discussion of these approaches see generally Solimine, *supra* note 45.

⁶¹ See, e.g., ALBERT BLAUSTEIN & ROY MERSKY, *THE FIRST ONE HUNDRED JUSTICES: STATISTICAL STUDIES ON THE SUPREME COURT OF THE UNITED STATES* (1978); Albert Blaustein & Roy Mersky, *Rating Supreme Court Justices*, 58 A.B.A. J. 1183 (1972); Mott, *supra* note 5 (using rating by academics to analyze the reputations of state supreme courts). For a more general discussion of the reliance upon qualitative ratings see Caldeira, *supra* note 5.

⁶² See Landes, Lessig & Solimine, *supra* note 6.

⁶³ *Id.* at 318–20.

Klein and Morrisroe resist this assertion, arguing that the raw citations, relied upon by Landes, Lessig, and Solimine, do not adequately capture the question at issue.⁶⁴ Namely, “it is not at all clear what citations measure.”⁶⁵ For example, raw citations might capture an entire host of factors unrelated to prestige and influence including panel assignment, case effects, as well as other stochastic elements. To combat these concerns, Klein and Morrisroe offered a modified citation analysis—limited to instances where individual judges are cited by name. They assert “more prestigious judges should more often be cited by name and, therefore, citations by name should be a valid indicator of a judge’s prestige.”⁶⁶ The Klein and Morrisroe approach provides a list of ultra-prestigious jurists whose views might be more likely to be followed than less socially prominent colleagues.⁶⁷

These lists are important as socially elite opinion regarding what constitutes a sound legal rule is not static. At the same time, given that the judicial social world displays significant adherence to particular interpretative approaches, a robust theory of change should describe which actors, if any, are disproportionately likely to garner acceptance from their colleagues. Specifically, at first pass, it would appear no individual jurist could, through his or her mere pronouncement, induce acceptance of a given legal rule by his or her colleagues. Yet this may depend upon the social position of the actor making the pronouncement. If certain jurists in the judicial hierarchy possess a greater level of

⁶⁴ Klein & Morrisroe, *supra* note 6, at 376.

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.* at 381 tbl.2.

prestige and influence than their surrounding peers, then only a small number of diffuse but socially important agents might actually be necessary to induce widespread convergence from their less prominent colleagues. The popular literature calls this threshold a “tipping point.”⁶⁸ In more formal terms, it is the relative measures of social structure developed within the networks literature that may yield information about the conditions under which one might observe a doctrinal phase transition.⁶⁹

The growing work employing the citation methodology offers significant insight into questions of judicial esteem.⁷⁰ Building upon the themes of this scholarship, we believe a

⁶⁸ See generally GLADWELL, *supra* note 19. Popular science author Malcolm Gladwell and networks scientist Duncan Watts disagree about the applicability of this hypotheses. See Clive Thompson, *Is the Tipping Point Toast?*, FAST COMPANY, Jan. 28, 2008, <http://www.fastcompany.com/node/641124/print> (quoting Professor Watts: “‘If society is ready to embrace a trend, almost anyone can start one—and if it isn’t, then almost no one can.’ To succeed with a new product, it’s less a matter of finding the perfect hipster to infect and more a matter of gauging the public’s mood.”). With this in mind, it is important to note how idea salience together with social structure and exogenous forces ultimately dictate whether a cascade around a particular trend will follow.

⁶⁹ It is exceedingly difficult for phenomena drawn from the social world to meet the precise conditions defined for a phase transition. Therefore, given the currently available empirical evidence, our use of the term is designed to be metaphoric.

⁷⁰ There is a growing domestic and international literature analyzing judicial citations. See, e.g., Mita Bhattacharya & Russell Smyth, *The Determinants of Judicial Prestige and Influence: Some Empirical Evidence from the High Court of Australia*, 30 J. LEGAL STUD. 223 (2001); Stephen Choi & Mitu Gulati, *Bias in Judicial Citations: A Window into the Behavior of Judges?*, 37 J. LEGAL STUD. 87 (2008); Stephen Choi & Mitu Gulati, *Choosing the Next Supreme Court Justice: An Empirical Ranking of Judicial Performance*, 78 S. CAL. L. REV. 23 (2004); Peter McCormick, *The Supreme Court Cites the Supreme Court: Follow-up Citation on the Supreme Court of Canada, 1989–1993*, 33 OSGOODE HALL L.J. 453 (1996); see also *supra* note 44 and accompanying text. Critiques of citation counts assert that the randomness associated with case assignment, as well as other factors, injects a stochastic component into such analysis. We believe that our effort, taken together with the citation count scholarship, should yield strong insight into the path of information flow. For a sample of the critiques of citation analyses, see Arthur Austin, *The Reliability of Citation Counts in Judgments on Promotion, Tenure, and Status*, 35 ARIZ. L. REV. 829 (1993); Steven Goldberg, *Federal Judges and the Heisman Trophy*, 32 FLA. ST. U. L. REV. 1237 (2005); James Gordon, *Cordozo’s Baseball Card*, 44 STAN. L. REV. 899 (1992). For a counter-argument see Richard Posner, *An Economic Analysis of the Use of Citations in the Law*, 2 AM. L. & ECON. REV. 381 (2000).

mapping of the judicial social landscape, using a measure other than citations, should supplement this literature by visualizing the relative position of both individuals and communities of judicial actors. Additionally, such an analysis should uncover the structural properties of interactions across the aggregate federal judiciary. While our measures are admittedly partial and do not completely adjudicate all questions, we hope this article, taken together with the scholarship will motivate a wide host of additional “network analysis and law” scholarship.

The Market for Federal Judicial Law Clerks

Federal judicial clerkships are desirable employment opportunities to which many individuals aspire. For the successful applicant, an elite clerkship provides personal prestige as well as a series of tangible dividends.⁷¹ In addition to the immediate financial rewards, such positions are linked to advancement in a variety of hierarchies—including advancement within the legal profession, the legal academy and in some instances future elevation to the bench. The financial and professional rewards are not the only attractive elements. Commentators assert that law clerks exert an increasing influence over both the agenda⁷² and the substantive content of judicial outcomes.⁷³ For a law student or freshly

⁷¹ A series of recent reports note that the bonuses offered by law firms seeking to employ a Supreme Court law clerk now reach as high as \$250,000. Taken together with their base salary such individuals can expect to earn in excess of \$400,000. *See, e.g.,* David Lat, *The Supreme Court's Bonus Babies*, N.Y. TIMES, June 18, 2007, at A19 (asserting that these bonuses are good for the legal system as they incentivize talented young lawyers to provide service to the Court).

⁷² *See, e.g.,* TODD PEPPERS, *COURTIERS OF THE MARBLE PALACE: THE RISE AND INFLUENCE OF THE SUPREME COURT LAW CLERK* (2006); ARTEMUS WARD & DAVID L. WEIDEN, *SORCERERS' APPRENTICES: 100 YEARS OF LAW CLERKS AT THE UNITED STATES SUPREME COURT* (2006); Barbara Palmer, *The "Bermuda Triangle?" The Cert Pool and Its Influence over the Supreme Court's Agenda*, 18 CONST.

minted lawyer, the opportunity to participate in the shaping of the law, taken together with the social prestige and labor market dividends, incentivize a qualified individual to seek such employment.

Following an initial sorting process, including in most cases a personal interview, a judge may tender an offer to a selected applicant.⁷⁴ Such an offer could be extended immediately following the interview or could come at a future moment. The content of the offer is exceedingly similar across judges at a given level of the judicial hierarchy.⁷⁵ The salary is determined exogenously and “fixed.”⁷⁶ As Professor Priest notes, “even where there are differences across clerkships, their expected value is low because of the

COMMENT. 105 (2001); Jan Palmer & Saul Brenner, *The Law Clerks' Recommendations and the Conference Vote On-the-Merits on the U.S. Supreme Court*, 18 JUST. SYS. J. 185 (1995).

⁷³ See, e.g., PEPPERS, *supra* note 71; WARD & WEIDEN, *supra* note 71; Jim Chen, *The Mystery and the Mastery of the Judicial Power*, 59 MO. L. REV. 281, 302 (1994) (arguing that clerk involvement in opinion drafting “can supply all the agenda control that is needed to swing outcomes and rationales in individual cases.”); J. Daniel Mahoney, *Law Clerks: For Better or for Worse?*, 54 BROOKLYN L. REV. 321, 339 (1998).

⁷⁴ While there are important variations in hiring practices, such as the timing of an offer, there is also substantial consistency in approaches. With some limited variation, for those judges who hire permanent clerks, the basic selection process follows a consistent pattern. Law students or young lawyers submit an application of materials including their resume, transcripts, writing sample and letters of reference. See generally Ruggero J. Aldisert, Ryan C. Kirkpatrick & James R. Stevens III, *Rat Race: Insider Advice on Landing Judicial Clerkships*, 110 PENN. ST. L. REV. 835 (2006). As there is significant uncertainty regarding the prospects for placement, it is quite common for aspirants to submit tens or even hundreds of such applications. *Id.* at 837–38 (noting that the average applicant sends materials to sixty-five judges but “[i]t is not atypical for a qualified applicant to apply to over 150 judges.”). In a manner similar to other hiring practices, judges, often with the assistance of current clerks, filter the large sea of applicants and contact a selected few for an individual interview. Applicants as well as judges typically schedule a battery of such interviews. The interview is often a face-to-face interaction with the judge as well as members of the judge’s staff. Assuming basic intellectual merit, many judges use the interview to determine whether the individual’s temperament properly interfaces with the chamber’s. See generally *id.*

⁷⁵ See, e.g., George L. Priest, *Reexamining the Market for Judicial Clerks and Other Assortative Matching Markets*, 22 YALE J. ON REG. 123, 154–55 (2005) (“Although individual judges will have different temperaments and will work their clerks more or less intensively, job conditions themselves are fungible over a large range.”).

⁷⁶ See Christopher Avery, Christine Jolls, Richard A. Posner & Alvin E. Roth, *The Market for Federal Judicial Law Clerks*, 68 U. CHI. L. REV. 793, 799 n.14 (2001); Priest, *supra* note 74, at 154 (“Salaries are fixed, set by Congress.”).

short tenure of the job.”⁷⁷ There is very little range for negotiation over the terms of the position. Essentially, the offer is dichotomous.⁷⁸

While this description of the clerk selection process might appear innocuous, a substantial amount of recent scholarship argues otherwise. The past two decades witnessed a burgeoning literature devoted to analyzing both the role of as well as the labor market for federal judicial law clerks.⁷⁹ It is this latter commentary regarding clerk hiring that is most germane to this article. Although not completely attributable to any single source, Judge Wald’s 1990 essay is the probable origin of recent commentary discussing the selection mechanism for federal law clerks.⁸⁰ The former Chief Judge of the D.C. Circuit Court of Appeals describes the clerk hiring process as undignified and cites others who characterize it as “frenzied,”⁸¹ “ludicrous,”⁸² and “madcap decision making.”⁸³ While her essay is a call for reform, she offers some keen observations about the conditions underlying the nature of the law clerk market.

She observes that an “excellent versus a mediocre team of clerks makes a huge difference in the judge’s daily life and in her work product.”⁸⁴ Thus, judges, in part, seek

⁷⁷ See Priest, *supra* note 74, at 154.

⁷⁸ In other words, it is a zero or one—a take it or leave it offer.

⁷⁹ For a small slice of this literature see *supra* notes 71–73 and accompanying text.

⁸⁰ See Patricia M. Wald, *Selecting Law Clerks*, 89 MICH. L. REV. 152 (1990).

⁸¹ See *id.* at 152 (citing David Margolick, *At the Bar: Annual Race for Clerks Becomes a Mad Dash*, N.Y. TIMES, Mar. 17, 1989, at B4).

⁸² *Id.*

⁸³ See Wald, *supra* note 79 (citing internal correspondence).

⁸⁴ *Id.* at 153.

strong clerks as it lightens their workload or allows them more effectively to advance their substantive agenda. As Judge Wald notes, “a judge sometimes decides whether to file a separate opinion or to dissent in a case based—at least in part—upon the support she can anticipate from her clerks.”⁸⁵ In addition to internal administrative motivations, external reputational considerations also encourage artful hiring practices. In a commonly quoted sentence, Judge Wald asserts, “A judge’s reputation among his own colleagues may in part reflect his ability to garner the most highly-credentialed clerks under his banner so that he can maintain a reputation as a ‘feeder’ of clerks to the Supreme Court.”⁸⁶

It is the strong demand for stellar clerks that in large part fueled the “frenzied mating ritual.”⁸⁷ The process, as described by Wald, includes “short fuse” offers and “[e]arly-bird judges skim[ming] off those applicants with the brightest credentials.”⁸⁸ Despite various efforts to cajole their colleagues to adhere to a consistent hiring date, reform efforts consistently unraveled. While unraveling is a source of distress for Judge Wald, it is the behavior produced by the market for clerks and its reflection upon the judicial branch that is her greatest concern.⁸⁹

⁸⁵ *Id.* Judge Wald additionally notes, alternatively, that “she may ask for, or beg off, responsibility for a particular opinion assignment because of the availability or nonavailability of a particular clerk to work on the case.” *Id.*

⁸⁶ Wald, *supra* note 79, at 154.

⁸⁷ *Id.* at 152 (citing David Margolick, *supra* note 80, at B4).

⁸⁸ *Id.* at 156.

⁸⁹ *Id.* at 152. “[T]he law of the jungle reigns and badmouthing, spying and even poaching among judges is rife.” *Id.*

While Judge Wald’s position is certainly shared by some of her colleagues, her position has not received uniform support. For example, the following year witnessed a rejoinder offered by Ninth Circuit Judge Alex Kozinski.⁹⁰ Through his 1991 article, Judge Kozinski acknowledges that in reaction to “complaints about ‘badmouthing, spying and even poaching among judges’ . . . we should all try to do better.”⁹¹ Despite this concession, Judge Kozinski otherwise states that “there is nothing at all wrong with the current law clerk selection process; everything is hunky dory.”⁹² Instead of reform, he passionately argues, “federal judges should get off their pedestals and compete”⁹³ For Judge Kozinski, reform proposals simply stymie upstarts by advantaging judges with geography, seniority and existing high levels of prestige.⁹⁴

This first round of commentary, including efforts by the aforementioned jurists as well as others,⁹⁵ brought a variety of unique reform proposals and provided a wealth of

⁹⁰ Alex Kozinski, *Confessions of a Bad Apple*, 100 YALE L.J. 1707 (1991).

⁹¹ *Id.* at 1715.

⁹² *Id.* at 1707.

⁹³ *Id.* at 1714.

⁹⁴ “Judges with many years on the bench naturally have an advantage over *upstarts* like me who have to work hard at achieving a national reputation. The problem with many reform proposals is that they tend to *reinforce these patterns* by decreasing the means by which less-favored clerkships can compete for desirable applicants.” *Id.* at 1719 (emphasis added).

⁹⁵ With a debate in full force, the years that immediately followed witnessed a number of judges and commentators entering the fray. For example, Judge Oberdorfer and his former clerk filed a response to Judge Kozinski arguing his objections are misplaced and that a medical style matching system would improve the state of affairs. Louis F. Oberdorfer & Michael N. Levy, *On Clerkship Selection: A Reply to the Bad Apple*, 101 YALE L.J. 1097 (1992). Trenton Norris offered a clerk’s perspective on the discontents of the current market. See Trenton H. Norris, *The Judicial Clerkship Selection Process: An Applicant’s Perspective on Bad Apples, Sour Grapes, and Fruitful Reform*, 81 CAL. L. REV. 765 (1993). Judge Becker, Justice Breyer, and Judge Calabresi set forth their “Modest March 1 solution” to the clerk hiring process. Edward R. Becker, Stephen G. Breyer & Guido Calabresi, *The Federal Judicial Law Clerk Hiring Problem*

qualitative insight into the state of the law clerk hiring process. The second strand of “clerk market” scholarship advanced an economic solution to the discontents of the clerk market. Most notably, Professors Avery, Jolls, Roth and Judge Posner produced what has been called the Harvard-Chicago analysis of the law clerk market.⁹⁶ Using detailed survey data, the Harvard-Chicago study provided extensive, empirical insight into the experience of judges and clerks in the hiring process.⁹⁷ Their data, taken together with subsequent economic analysis, argued the clerk selection process failed to maximize “the sum of satisfaction” of judge and clerk matches. Namely the clerk market, like other markets with timing problems, is plagued with unraveling. Individual judges have substantial incentive to deviate from agreed hiring dates as the existing regulatory mechanisms did not impose enforceable timing regulations.⁹⁸ Judges who might otherwise be inclined to abide with a given hiring date are forced to defect from that date to avoid the “sucker payoff.”⁹⁹ Therefore, in only a few iterations such conditions invariably produce widespread non-compliance.

and the Modest March 1 Solution, 104 YALE L.J. 207 (1994). In the period between crafting and final publication of this article Judge Breyer became Justice Breyer.

⁹⁶ Avery, *supra* note 75.

⁹⁷ “A fundamental goal of our project has been to gain an improved understanding of how the market for federal judicial law clerks actually operates. There are many rumors and opinions about this market, and few hard facts.” *Id.* at 796.

⁹⁸ *Id.*

⁹⁹ The Harvard-Chicago study offers a partial solution to the problem of enforceability. It argues that “the Supreme Court could play an important and productive role in helping to organize and improve the market for federal law clerks” and “suggest[s] a partial solution, which would require judges who wish their clerks to be eligible for United States Supreme Court clerkships to enroll in a centralized matching system” *Id.* at 885. The proposal is well conceived as it realigns the incentives by sanctioning the very individuals who are most inclined to engage in early exploding offers.

Although disagreeing with a number of conclusions of the Harvard-Chicago study, Professor Priest, as quoted earlier, observes that “job conditions themselves are fungible over a large range . . . [e]ven where there are differences across clerkships, their expected value is low because of the short tenure of the job.”¹⁰⁰ Since less prestigious judges cannot offer a compensating wage differential “[t]he timing of the offer, thus, becomes a term of trade in the clerkship market transaction.”¹⁰¹ Thus, “first movers” such as Judge Kozinski are able to increase their relative standing through strategic behavior early in their career.

Of course, if timing of offer was the sole sorting mechanism in the clerk market, the traffic of law clerks might be a poor proxy from which to operationalize the aggregate social structure. Some portions of the literature, if reviewed in isolation, imply that the strategic behavior of judges simply overwhelms law clerks and precludes them from obtaining their optimal match. For example, the Harvard-Chicago data indicates a majority of respondents who received an offer did so either during or within two days of their interview.¹⁰² At the same time, judges often expected quick or even immediate responses to such offers.¹⁰³

Given these conditions, clerks face significant pressure to avoid an “exploding” offer from a less preferred judge. Yet, a number of clerks, often with guidance from their

¹⁰⁰ See Priest, *supra* note 74, at 154.

¹⁰¹ *Id.* at 155.

¹⁰² See Avery, *supra* note 75, at 814 tbl.1.

¹⁰³ *Id.* at 814 tbl.2.

professors and law school career services offices, use compensating techniques to resist a sub-optimal match. For example, Judge Wald notes “[s]avvy clerk applicants . . . called chambers in advance to announce that that particular judge was the first choice.”¹⁰⁴ In addition, strategic scheduling is another important compensating technique. Strategic schedulers organize their interviews in relationship to their choices over judges. Specifically, if clerks schedule interviews in strict association to their preference ordering, then an exploding offer, of course, would not be problematic but rather a welcome event.¹⁰⁵

A Marriage of Convenience?

The purpose of this article is not to engage the debate over the proper regulatory mechanism, if any, which should govern the clerk market. The recent hiring moratorium, for example, may limit some of the discontentment experienced under the prior regime.¹⁰⁶ We will leave the evaluation of such questions to more qualified scholars.¹⁰⁷ Our interest in law clerks and the respective labor market is simply to study and visualize their traffic to gain insight into questions of inter-judge connectivity. The hiring of clerks is an

¹⁰⁴ See Wald, *supra* note 79, at 158.

¹⁰⁵ See Aldisert, Kirkpatrick & Stevens, *supra* note 73, at 848 (quoting an unnamed Fifth Circuit judge: “If an applicant really wants a position with a particular judge, he can signal that by offering to do an interview the first day.”)

¹⁰⁶ For a detailed analysis of the effects of the hiring moratorium see generally Christopher Avery, Christine Jolls, Richard A. Posner & Alvin E. Roth, *The New Market for Federal Judicial Law Clerks*, 74 U. CHI. L. REV. 447 (2007).

¹⁰⁷ *Id.*

intimate act,¹⁰⁸ one where deliberation or forethought should attach. While it is a choice under uncertainty, a significant number of signals are available. Some signals, such as grade point average, law review membership, or personal background, are intrinsic to the individual clerk. Other cues come from third parties. As the foregoing analysis is limited to law clerks flowing between various judicial actors, judges who previously employed the given clerk provide either an explicit or implicit signal to the subsequent hiring jurist. In general, judges and communities of jurists who consistently share clerks probably do so because the receiver either respects the judgment of his or her colleagues or otherwise shares a social connection with the senders.

Thus, embedded in the immensely interesting literature analyzing the market for federal law clerks is language and commentary that should be of particular interest to the larger public law scholarship. Notwithstanding their critiques of the efficiency of a number of allocative elements of the clerk market, many authors observe it is prestige that in large part motivates both the judges and their would-be apprentices.¹⁰⁹ Consider Judge Wald as quoted earlier¹¹⁰ and Professor Priest who notes “other things equal, prominent judges are able to secure the most qualified clerks.”¹¹¹ Of course, the Harvard-Chicago findings counsel some degree of caution from reliance upon clerk traffic as the perfect measure for the relative social position of federal judges. However, even their

¹⁰⁸ See Wald, *supra* note 79, at 153 (arguing “[t]he judge-clerk relationship is the most intense and mutually dependant one I know of outside of marriage, parenthood, or a love affair.”).

¹⁰⁹ The term “sorcerers’ apprentice” is borrowed from a well-received recent book on Supreme Court Law Clerks. See WARD & WEIDEN, *supra* note 71.

¹¹⁰ See Wald, *supra* note 79, at 153.

¹¹¹ Priest, *supra* note 74, at 162.

proposal for reform, centered upon restricting feeding to the United States Supreme Court, acknowledges that social prestige and influence is attached to the ability to attract and feed “star” clerks.¹¹²

In all, despite the caveats the literature on the clerk market might impose, there remains significant information embedded in the market for judicial clerks that should help inform the greater public law literature. While a simple descriptive account or tabulation of so called “feeder” judges would certainly demonstrate which individuals consistently sent their law clerks to the levels above, such analysis fails to characterize communities and capture concepts such as social position and attraction. While some of the clerk moves may be wholly unrelated to our question of inquiry, we believe in the aggregate, the majority of such moves are related to social advancement. In general, clerks move from judges with a lower social position to those with a higher social standing. Given the clear labor market payoffs available in the private market, many clerks who remain in the network in order to flow between judges often do so in order to increase their personal position.¹¹³ In the face of significant opportunity costs for remaining a public employee, clerks are voting with their feet, and their traffic—particularly in the aggregate—says something important.

¹¹² See Avery et al., *supra* note 75.

¹¹³ At least some number of clerks who remain and move from the Federal Circuit Court to the Federal District Court may do so in order to offer potential employers a better portfolio of experience. In fact, it is also possible that clerks who move downward in the hierarchy may do so in order to work in geographic locations that they consider more attractive. Recognizing this caveat we still believe, all things being equal, as a clerk searches for an additional clerkship, imposing whatever limiting parameters he or she chooses, to the extent the individual selects among judges, prestige is an important part of the decisional calculus.

PART III. THE VISUALIZATION AND CHARACTERIZATION OF THE JUDICIAL SOCIAL NETWORK

Inspired by our desire to better understand its social topography, we used the tools of network analysis to visualize the structure of the federal judiciary. To build the connections between actors, we collected a decade’s worth of federal law clerk information and used this data to visualize the flow of clerks between judges. Bolstered by subsequent analytics, our visualizations yield some interesting findings. First, while the notion of a “feeder judge” is commonly invoked, this study visualizes the concept. Visualization displays a host of secondary movers who “feed” the feeders thereby increasing their centrality within the network. The overall structure of the network, visualized in Figures 1–4 *infra*, is also intriguing. Despite the presence of clear cliques or communities, the center of the network is dense and clustered enough to keep interconnected most of the members of the federal judiciary.¹¹⁴

Data Collection: Sources and Approach

With the assistance of our research team,¹¹⁵ we collected available information for every federal law clerk employed by an Article III judge during the “natural” Rehnquist Court (1995–2004). This process proved challenging as no particular data source

¹¹⁴ Figures 1–4 *infra* do not contain every member of the federal judiciary. Although nearly six hundred members are present, the visualizations omit judges who over the decade-long period failed to send a single clerk to another federal judge.

¹¹⁵ We would be remiss if we did not take the opportunity to thank Eric Provins, Steven Schwartz, Courtney O’Brien, Pamela Kiel, Stephen Janos, Eitan Ingall, Daniel Schwartz, Art Reyes, Jon Tshiamala, Alex Hughes, Noah Korn, Neil Tambe, Nicole Tyrna, Erin Copland, Matthew Smith, Darin Goldstein, Alex Satanovsky, Benjamin Ruano, and Alex Karpowitz for their assistance with data coding.

contained a complete listing of such information. However, our data set combines a diverse set of sources and reflects nearly all law clerks at all levels for the relevant years.¹¹⁶

Given its extensive treatment, we began our effort by consulting *The Judicial Yellow Book* published by Leadership Directories, Inc.¹¹⁷ This tri-annual serial publication contains extensive biographic information on virtually every state and federal judge in the United States. Included within this broad range of information are the names, and in most cases, educational history of various members of the judges' chambers. Using the fall edition in each year, our team collected all available identifying information including the clerk's full name, educational background, and year of service. Across the decade-long period, this process yielded a significant amount of the desired data.

Despite the extensive amount of information contained in *The Judicial Yellow Book*, our primary data collection effort left a non-trivial number of "missing" clerk values. In order to bolster the comprehensiveness of our dataset, we searched and filled missing values using *The Judicial Staff Directory*¹¹⁸ produced by CQ Press as well as selected years of the *National Association for Law Placement (NALP) Judicial Clerkship*

¹¹⁶ By our estimate, the data collection effort yielded approximately 95.2% of all law clerk events during the decade-long period.

¹¹⁷ The volumes of the *Judicial Yellow Book* that we consulted were Fall 1995–Fall 2004.

¹¹⁸ Specifically, we collected available copies the *Judicial Staff Directory* that covered the 1995–2004 window.

directory.¹¹⁹ This second level was largely successful and moved the dataset near completion. Yet, as we reviewed the totality of the dataset, it was clear that the set still contained some systematic bias with a large number of the missing values drawn from a discrete number of judges. In order to obtain these public but otherwise unavailable “clerk values,” our team searched for missing clerk values using Martindale-Hubbell¹²⁰ as well as the websites of various prominent law firms. To the extent the sum of these combined efforts also proved unavailing, we contacted both the judge’s former law clerks as well as the career services offices at a number of law schools located near the particular judge’s chambers.

In sum, while the dataset does not contain every discrete clerk value, the dataset reflects all reasonably available law clerk information for a decade long period. Appendix 3.1 displays some sample lines of code drawn from the dataset. As displayed *infra*, a given line of code contains not only the clerk’s full name, but also the clerk’s educational background, year of service, and the judge’s name.¹²¹ Furthermore, in order to link our set to existing data sources and to aid in future research, each “clerk event” reflected as an individual line of code contains judge identification and seat numbers drawn from the

¹¹⁹ While full coverage was not available, we collected available copies of the National Association for Law Placement (NALP) Judicial Clerkship Directory that covered the 1995–2004 window.

¹²⁰ Missing values were filled either using both the current as well as older version of the Martindale-Hubbell Directory.

¹²¹ For an example of the information contained in this dataset, see *infra* Appendix 3.1.

Gary Zuk, Deborah J. Barrow, and Gerard S. Gryski Attributes of Federal Court Judges dataset.¹²²

A complete version of the dataset contains in excess of 25,000 law clerk events drawn from not only Article III judges but also Article I Bankruptcy Court Judges. As the available data sources maintain the greatest degree of accuracy for the law clerks of non-senior status Article III judges,¹²³ we restricted our analysis to these jurists. Even with the clerks of Bankruptcy and Senior Status Judges removed, the dataset does not suffer from a want of information. Namely, the remaining dataset, as restricted, still contains nearly 19,000 total law clerk events for the decade-long period. These events are distributed across the federal judicial hierarchy with the majority of clerk events attributed to federal district courts.

Many of the clerks who appear in our dataset occupy exactly one line of code. Typically, such singletons are employed by a judge immediately following law school and exit the data-set at the completion of their discrete term. So called “permanent” law clerks reflect another subset of individuals in the dataset. Such individuals reflect multiple lines of code because a given individual judge employs them over a number of

¹²² The dataset is housed at Judicial Research Initiative at the University of South Carolina. The page contains both the district and circuit court datasets. See <http://www.cas.sc.edu/poli/juri/index.php> (last visited Jan. 2, 2009).

¹²³ For a detailed discussion of senior judges including a claim that Senior Judges are unconstitutional, see generally David R. Stras & Ryan W. Scott, *Are Senior Judges Unconstitutional?*, 92 CORNELL L. REV. 453 (2007). “Senior judges are the product of a patchwork of several statutes governing judicial retirement, the most significant of which is 28 U.S.C § 371. Federal judges become eligible for retirement benefits upon satisfying the “Rule of Eighty”—when the sum of their age and years of service on the federal bench reaches eighty. At that point, the judge has two retirement options: outright retirement, which for the sake of clarity we will call ‘resignation,’ and the form of semiretirement known as ‘senior status.’” *Id.* at 460.

years. Our analysis is not directly focused upon either of these subgroups. Instead, it is directed at clerks who flow between judges.

To find clerk “movers,” we sorted the dataset by *clerk name* and then by *year*. This displayed clusters of individual clerk names. Using limiting properties such as middle initial, law school, and undergraduate institution,¹²⁴ we differentiated cases involving similar names. To qualify as a clerk move, an individual employed in a given period must have been hired by a different judge in a subsequent period. As such, it requires two lines of code to qualify as a clerk move. While we placed no precise limitation upon the timing of the subsequent interval, the vast majority of the clerk moves involved transfers in the year immediately following the first clerkship.

From our nearly 19,000 clerk events, we detected nearly 950 movements. As our analysis is exceedingly conservative in its willingness to validate a “mover,” the number of connections present in the true population likely exceeds the connections in our visualization of the social landscape. To execute the visualizations and craft the corresponding network statistics, we converted the lines of code representing “movers” into connections between judges. For example, if law clerk Doe_John moved between Judge A and Judge B, then we tallied a connection between those two jurists. Of the close to 950 total connections, nearly 500 represented discrete paths. In other words, the repeated connections concentrated on a very limited number of judicial actors. We

¹²⁴ We relied upon the values in this cell to the extent available. Often a clerk’s J.D.-granting institution was available to aid in the delimiting process while much of the undergraduate institutional information was unavailable.

entered this final dataset of clerk connections into *Pajek*.¹²⁵ Using *Pajek*, we produced the visualizations and generated the analysis contained *infra*.

The Visualization of the Judicial Social Network

The nodes are the individual judges and, as operationalized, the edges reflect a weighted measure of shared clerks between the jurists. Although the traffic is directed, we explicitly choose to model the network as undirected because we believe the influence is bidirectional.¹²⁶ Manually generating consistent and unbiased visualizations of a network of this size is a nearly impossible task. Automated drawing procedures developed in computer science, however, can be used to generate clear and transparent depictions of networks such as the federal judicial network. The two automated drawing procedures used in this article, Kamada-Kawai¹²⁷ and Fruchterman-Reingold,¹²⁸ are spring-embedded, force-directed placement algorithms. Although the technical characterization is discussed further in Appendix 3.2, an analogy may help characterize the drawing process.

¹²⁵ *Pajek* is one of the competing network software packages used by network scholars to generate visualizations. More information is available at <http://pajek.imfm.si/doku.php> (last visited Jan. 2, 2009).

¹²⁶ Our judicial social network based upon clerk traffic, displayed *infra* Figures 1–4, is thorny as the traffic is clearly directed, but we believe the social importance associated with the linkage travel in both directions. All modeling choices explicitly imply a weighting scheme. Our decision to assign equal directional weights seemed to be the most sensible approach. Possible extensions of this article might consider alternative theoretically motivated weighting schemes.

¹²⁷ See generally Tomihisa Kamada & Satoru Kawai, *An Algorithm for Drawing General Undirected Graphs*, 31 INFORMATION PROCESSING LETTERS, 7 (Apr. 12, 1989); see also Tomihisa Kamada & Satoru Kawai, *Automatic Display of Network Structures for Human Understanding*, University of Tokyo Department of Information Science, Technical Report No. 88-7 (1988).

¹²⁸ See generally Thomas M.J. Fruchterman & Edward M. Reingold, *Graph Drawing by Force-Directed Placement*, 21 SOFTWARE: PRACTICE AND EXPERIENCE 1129 (1991).

Imagine that the judge nodes are steel rings with opposing magnetic charges working to repel one another. Now visualize springs connecting the steel rings as the edges in the network. The longer a spring must stretch to connect the steel rings, the more energy is required to stretch the spring. The closer the positions of rings without connections are to one another, the greater is the energy required to hold those positions.¹²⁹ The aforementioned algorithms seek to minimize the energy required to balance these attracting and repelling forces.¹³⁰ After applying either Kamada-Kawai or Fruchterman-Reingold, the result is a graph that generally distributes vertices evenly, minimizes edge crossings, uses the planar area, reflects inherent symmetry, and minimizes differences in edge lengths.¹³¹

In terms of visualization, Fruchterman-Reingold tends to increase the difficulty of remaining in the center, pushing less connected nodes to an orbit with a larger circumference. Nevertheless, in overall structure and clustering, no substantive difference exists. Some network scholars believe the choice of algorithms should be determined by the size and density of the graph with 500 nodes as the recommended cut-point.¹³² Since the federal judicial network contains roughly 600 nodes, we included visualizations of both types of automated drawing. While the Kamada-Kawai energizing algorithm provides a nice visual of the overall structure of the network, the Fruchterman-Reingold

¹²⁹ Peter Eades, *A Heuristic for Graph Drawing*, 42 CONGRESSUS NUMERANTIUM 149–50 (1984).

¹³⁰ *Id.* at 149.

¹³¹ See Fruchterman & Reingold, *supra* note 127, at 1129.

¹³² See WOUTER DE NOOY, ANDREJ MRVAR & VLADIMIR BATAGELJ, *EXPLORATORY SOCIAL NETWORK ANALYSIS WITH PAJEK 17* (Cambridge Univ. Press 2005).

automated drawing provides greater clarity of the interconnectedness of the network's core.

With this introduction, consider the foregoing series of networks visualizations. Figures 3.1 and 3.3 use the Kamada-Kawai algorithms, while Figures 3.2 and 3.4 employ Fruchterman-Reingold. Figures 3.1 and 3.3 provide a wide view of the energized network while Figures 3.2 and 3.4 provide a close-up view including the network's core. A careful review of the Supreme Court Justices displays a familiar ideological distribution. As this effort is primarily directed at classifying social structure and differentiating among lower court judges, what is of greater interest are the communities of both circuit and district court judges who cluster around and feed these Justices. For ease, we rotated the foregoing figures so as to hold the traditional left to right ideological distribution.¹³³

¹³³ Rotation imposes no substantive consequences. If the graphics were rotated 90°, the relative positions of the nodes would remain unchanged. Rather, the Supreme Court Justices would simply be distributed North to South rather than East to West.

Figure 3.1: Wide View of the Kamada-Kawai Energized Judicial Social Network

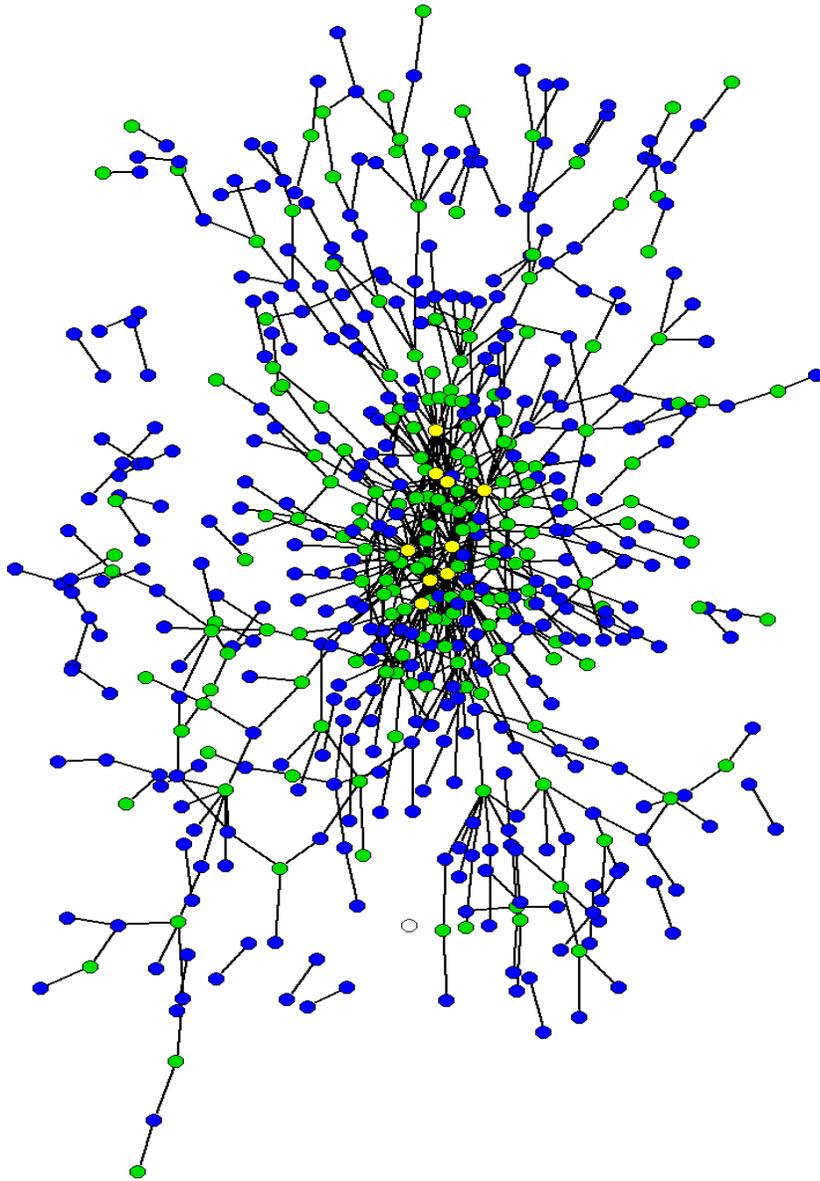


Figure 3.2: Wide View of the Fruchterman-Reingold Energized Judicial Social Network

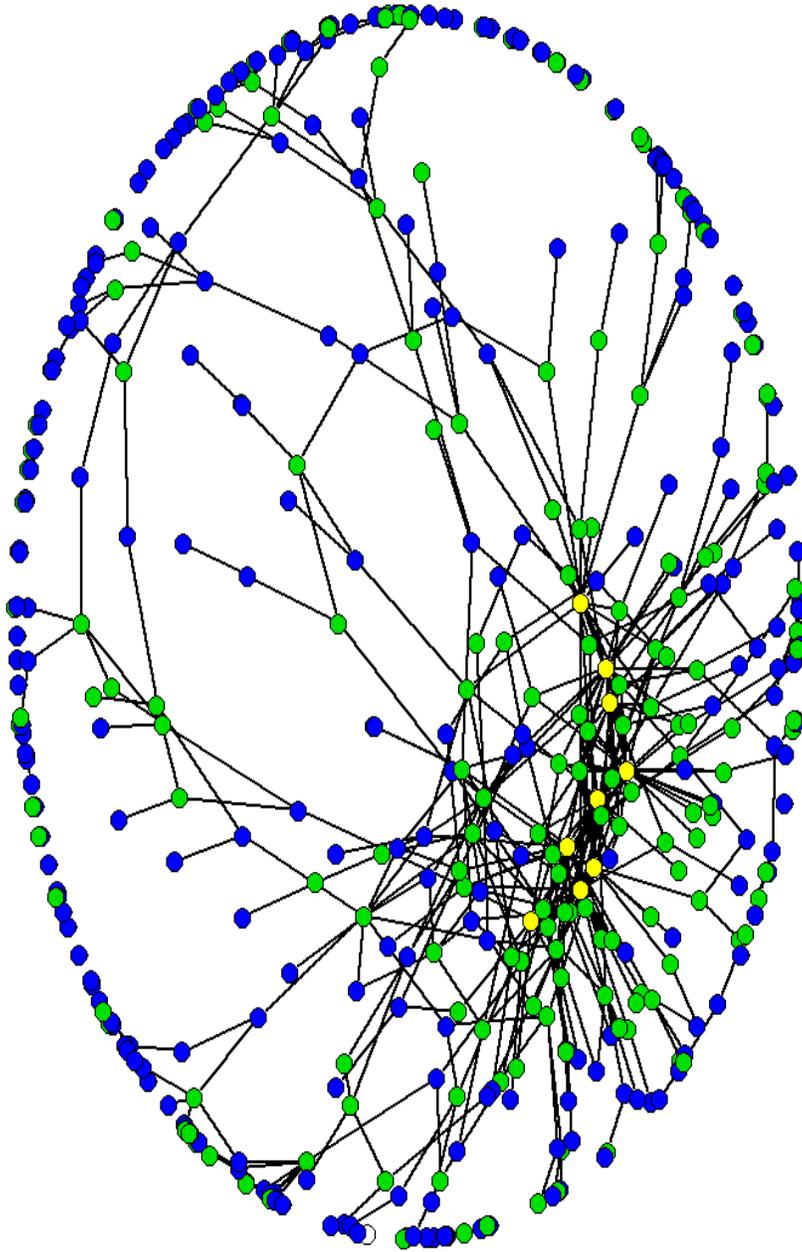
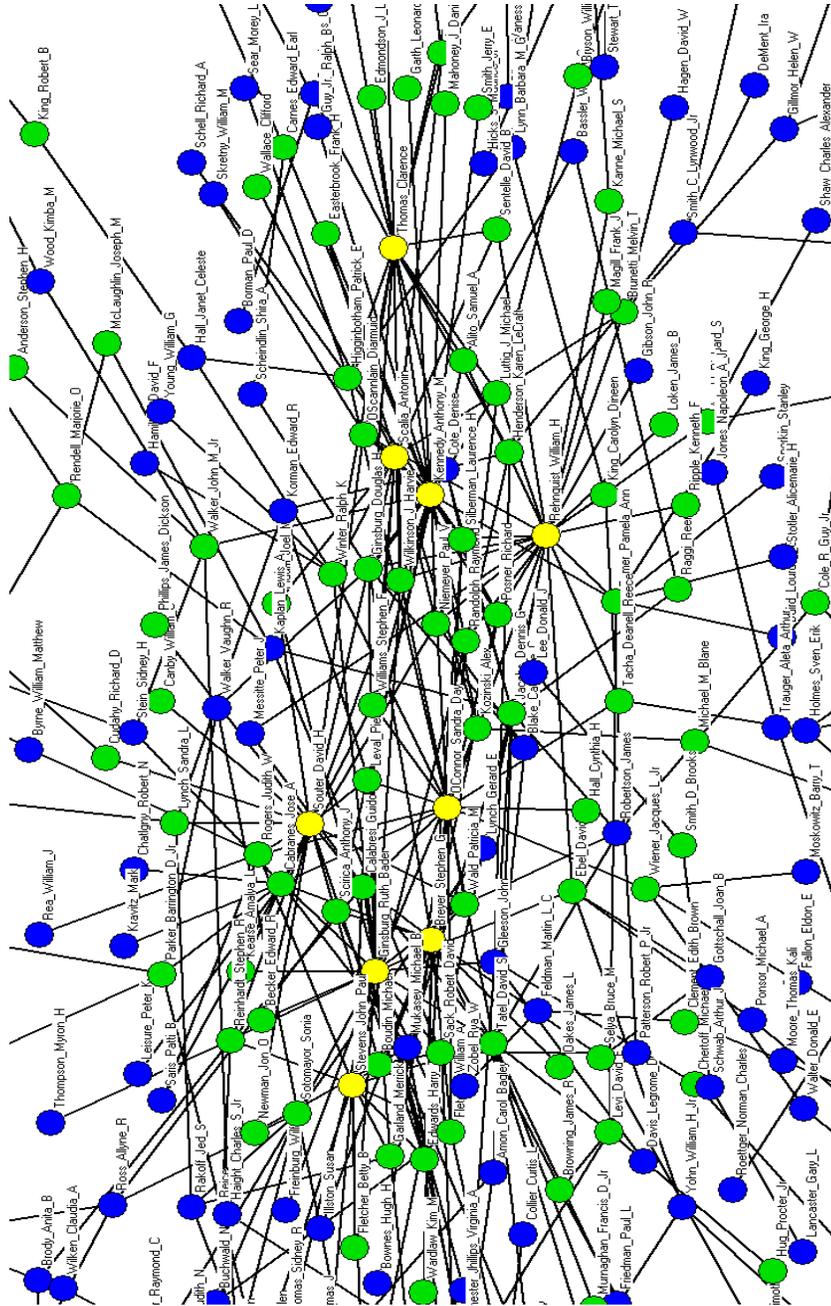


Figure 3.3: A Close View of the Kamada-Kawai Judicial Social Network



The judicial social network displays a densely connected center with clusters around the Supreme Court Justices. Each visual includes a partition for the formal distinctions between members of the Supreme Court (white); circuit court (gray); and district court (black). Although the formal institutional authority of each federal judge is essentially identical across actors holding the respective circuit/district distinction, our visuals support the finding of previous scholars who assert that the informal prestige and influence of various jurists is far from equal.³¹⁷

With respect to broad structure and consistent with their relative institutional position, district court judges are primarily located at the periphery of the network. However, a few selected judges sitting on the district court do persist and are located in close proximity to or the center of the network.³¹⁸ Although a non-trivial subset of the circuit court population finds itself at the boundary of the network, in general, a greater population of circuit court judges find themselves concentrated at the network's core. Thus, while institutional authority is certainly important, our analysis indicates that a mixture of formal and informal authority determines the placement of each judicial actor.

While the visualizations help display the social standing of various jurists as well as the broad structure of the network, it is ultimately the network statistics that offer

³¹⁷ It is likely of little surprise to observe prolific judges such as the Honorable Richard Posner, Harry T. Edwards, Samuel Alito, Merrick Garland, J. Harvie Wilkinson, Michael Luttig, and Guido Calabresi located in the core of the network.

³¹⁸ Included among these district court judges located close to the core of the network is Judge Michael Mukasey of the Southern District of New York. In late 2007, Judge Mukasey was confirmed as the eighty-first Attorney General of the United States.

clean, replicable depictions of the network and its various components. A wide variety of statistical approaches have been developed in the network science literature to consider such questions. Thus, in the proceeding sections we offer such analysis.

Identifying Central Actors in the Judicial Social Network

The extant social networks literature contains a wide number of statistical approaches designed to identify such prominent actors. Networks scholars place many concepts under the broad umbrella of centrality. The simplest form of centrality is a tally of the “degree” of each vertex, which refers to the number of connections to and from a given vertex. Although degree can be a useful measure of centrality, this simple aggregation of an actor’s connections does not take into account the differences in the prominence of a given actor’s connections. For example, a simple degree score implies that a social connection to Merrick Garland will increase that judge’s centrality score by the same increment as a connection to some less socially important jurist. Thus, while the definition of centrality is often elusive and different measures trade upon different analytics, we avoid much of the centrality debate by presenting herein three well-established centrality rankings—hubs and authority scores, closeness, and betweenness.

Originally derived for navigating the internet with text-based queries, the Hubs and Authorities (HITS) algorithm created by computer scientist Jon Kleinberg offers one

manner of identifying important nodes in a network.³¹⁹ The HITS algorithm assumes that in a large network there are two important types of nodes that serve different functions in the network based on their structural positions. The key distinction is the direction of their relation to other central nodes. A vertex with strong hub score displays connections *towards* important authorities, while a vertex with a strong authority score features connections *from* important hubs. As applied to the judicial network, a hub is a jurist who sends his/her clerks *to* prominent judges, while an authority would be a judge who accepts clerks *from* prominent judges.³²⁰ We exclude hub scores from the analysis because many of the most prominent district and circuit court judges rarely select clerks with prior clerkship experience. For this reason, otherwise highly prominent jurists such as Alex Kozinski and Richard Posner have authority scores that are low. Furthermore, given the specific proxy measure employed herein, we remove the nine Supreme Court Justices from the authority scores in Table 1 because their prestige is institutionally determined. Accordingly, our authority scores are exclusively limited to the lower court jurists.

³¹⁹ See Jon M. Kleinberg, *Authoritative Sources in a Hyperlinked Environment*, 46 J. ACM 604 (1998).

³²⁰ Prominent networks scholar James Fowler and his co-authors offer a very useful description of the Kleinberg algorithm. Applying their description to the judicial social network, let each judge's hiring capacity scores be $x_i = a_{1i}y_1 + a_{2i}y_2 + \dots + a_{ni}y_n$ and let each jurist's sending capacity be $y_i = a_{1i}x_1 + a_{2i}x_2 + \dots + a_{ni}x_n$. These equations produce $x = A^T y$ and $y = Ax$ in matrix format. These equations converge to the fixed points $\lambda x^* = A^T A x^*$ and $\lambda y^* = A A^T y^*$ where λ is the principle eigenvector. See James Fowler et al., *Social Networks in Political Science: Hiring and Placement of Ph.D.s, 1960–2002*, 40 PS: POL. SCI. & POL. 729, 730 (2007).

Closeness centrality measures the normalized shortest distance from a given node to all other nodes.³²¹ More simply stated, consider the node with the highest closeness score as the median of a network, because if the graph were represented as a number line like a chain, then the median would have the highest closeness centrality score. In the context of the federal judiciary network, this statistic will be highest when a judge is on average nearer to the rest of the jurists than any other judge.

Finally, betweenness centrality is often used to identify the bridges between different communities and clusters. To identify these gatekeepers, betweenness calculates the shortest paths (known as geodesics) between all pairs of vertices, identifies the frequency of each node appearing on those paths, then normalizes the statistic.³²² Jurists that exhibit high betweenness scores are not necessarily likely to be individuals that connect ideologically different groups together. These judges may act as gatekeepers that connect communities in a bowtie-like fashion. These jurists are, however, important in maintaining the connectivity of the network.

³²¹ See Dirk Koschützki et al., *Centrality Indices*, in NETWORK ANALYSIS: METHODOLOGICAL FOUNDATIONS 16 (Ulrik Brandes & Thomas Erlebach eds., 1998). If one denotes the sum of the distances from “a vertex u to any other vertex in a graph $G = (V, E)$ as the squared total distance: $c_c(u) = \sum_{v \in V} d(u,v)$.” *Id.* at 22. The most commonly employed definition of closeness is a “vertex centrality” built upon the reciprocal of the total distance: $c_c(u) = \left[\sum_{v \in V} d(u,v) \right]^{-1}$. *Id.* at 23.

³²² If one denotes the “fraction of shortest paths between s and t that contain vertex v ” as $\delta_{st}(v) = [\sigma_{st}(v)]/(\sigma_{st})$, then betweenness centrality of a given vertex is given by: $c_b(v) = \sum_{s \neq v \in V} \sum_{t \neq v \in V} \delta_{st}(v)$. *Id.* at 29–30.

Centrality measures must be interpreted contextually as their meaning can vary across bipartite networks, directed networks, and negative affective networks. Table 1 presents the jurists ranked in terms of authority scores, closeness, and betweenness. The judges are presented in order of their scores. The first ranking is given to the jurist with the most prominent structural position based on the respective statistic. We exclude Supreme Court Justices from Table 1, given their institutionally imposed structural position within the judicial social network.

Table 3.1: Ranking Jurists Using Various Measures of Centrality

Rank	Authority	Closeness	Betweenness
1	Luttig, J. Michael	Ginsburg, Douglas H.	Sotomayor, Sonia
2	Wilkinson, J. Harvie	Wilkinson, J. Harvie	Brunetti, Melvin T.
3	Kozinski, Alex	Silberman, Laurence H.	Gillmor, Helen W.
4	Silberman, Laurence H.	Randolph, A. Raymond	Straub, Chester J.
5	O'Scannlain, Diarmuid	Tatel, David S.	Henderson, Karen LeCraft
6	Calabresi, Guido	Jacobs, Dennis G.	Gilman, Ronald Lee
7	Tatel, David S.	Luttig, J. Michael	Tjoflat, Gerald B.
8	Posner, Richard	Calabresi, Guido	Gibbons, Julia Smith
9	Ginsburg, Douglas H.	Williams, Stephen F.	Randolph, A. Raymond
10	Sentelle, David B.	Kozinski, Alex	Tatel, David S.
11	Boudin, Michael	Winter, Ralph K.	Gleeson, John
12	Edwards, Harry T.	Gleeson, John	Black, Susan Harrell
13	Williams, Stephen F.	Cabranes, José A.	Arnold, Morris S.
14	Garland, Merrick B.	O'Scannlain, Diarmuid	Walker Jr., John M.
15	Jones, Edith Hollan	Garland, Merrick B.	Sentelle, David B.
16	Leval, Pierre N.	Leval, Pierre N.	Ross, Allyne R.
17	Niemeyer, Paul V.	Edwards, Harry T.	Timlin, Robert James
18	Winter, Ralph K.	Henderson, Karen LeCraft	Bybee, Jay S.
19	Randolph, A. Raymond	Boudin, Michael	Jacobs, Dennis G.
20	Reinhardt,	Niemeyer,	Brody,

	Stephen R.	Paul V.	Anita B.
21	Cabranes, José A.	Sotomayor, Sonia	White, Jeffrey S.
22	Higginbotham, Patrick E.	Posner, Richard	Ginsburg, Douglas H.
23	Wallace, J. Clifford	Fletcher, William A.	Benavides, Fortunato P.
24	Rymer, Pamela A.	Wald, Patricia M.	Robertson, James
25	Fletcher, William A.	Higginbotham, Patrick E.	Hornby, David Brock

Classifying the Physical Properties of the Judicial Social Network

In addition to identifying central nodes, network scientists are often interested in classifying the structural properties of a given network. Namely, with a conception of the network’s physical characteristics, it is possible to consider the class of micro-level generative processes plausibly responsible for the observed macro-structure. One manner to classify the aggregate structure of a network is to tally the number of degrees between the actors and determine the distribution of such connections. There exist many potential forms this distribution of authority could assume.³²³ For example, the distribution could be relatively uniform—with a wide number of actors possessing a moderate level of connections. The distribution could be distributed normally or alternatively could be centered upon a small number of socially prominent actors.

In a large number of social and physical networks, including the judicial social network, the degree distribution follows this latter orientation. The concentration of degrees over a small subset of actors yields a heavy-tailed distribution. While the “fat-

³²³ For an extended discussion of these various “states of the world” as applied to the federal judiciary, see Katz, Stafford & Provins, *supra* note 12.

tailed” distribution of degrees is most commonly associated with the power law distribution, a wide array of other closely linked distributions including the exponential, the power law with cutoff and log-linear distribution are also possible.³²⁴

Figure 3.5 is a frequency distribution plot of the number of judges by the degree of each judge (the degree is simply the measure of how many edges are incident with each node), the L-shaped curve consistent with extreme skewing emerges. The log/log graph offers a cleaner view of the tail of the degree distribution. As before, the Supreme Court Justices are excluded from this analysis because their structural position relative to degree distribution is a construct of their institutional position. Namely, each year, each Justice accepts a defined number of clerks, virtually all of whom have served as a clerk for one of their lower court colleagues.³²⁵

³²⁴ See Aaron Clauset, Cosma Rohilla Shalizi, & M. E. J. Newman, *Power-Law Distributions in Empirical Data*, 51 SIAM REV. 661 (2009), available at http://arxiv.org/PS_cache/arxiv/pdf/0706/0706.1062v1.pdf. The authors define the Power Law, Exponential, and Log-Normal Distributions as generated by the following equations respectively $p(x) = [(\alpha - 1)x_{\min}^{\alpha-1}]x^{-\alpha}$, $p(x) = [\lambda e^{\lambda x_{\min}}]e^{-\lambda x}$, and $p(x) = \sqrt{\frac{2}{\pi\sigma^2}} \left[\operatorname{erfc}\left(\frac{\ln x_{\min} - \mu}{\sqrt{2}\sigma}\right) \right]^{-1} \left[\frac{1}{x} \exp\left(-\frac{(\ln x - \mu)^2}{2\sigma^2}\right) \right]$. *Id.* at 665.

³²⁵ In the period 1995–2004, we find that nearly 99% of the Supreme Court law clerks were drawn from lower courts. Professor W. William Hodes, law clerk to Justice Ginsburg during the 1996 term, represents a rare exception to this global trend. A former student of Justice Ginsburg from her tenure as a law professor at Rutgers, Mr. Hodes served as her law clerk without first serving for a lower court judge. Other exceptions include individuals such as Rachael L. Brand, who clerked for the Honorable Charles Fried of the Massachusetts Supreme Court prior to her service to Justice Kennedy, and Adam M. Samaha, who clerked for the Honorable Alexander Keith of the Minnesota Supreme Court prior to clerking for Justice Stevens.

Figure 3.5: The Highly Skewed Degree Distribution of the Judicial Social Network

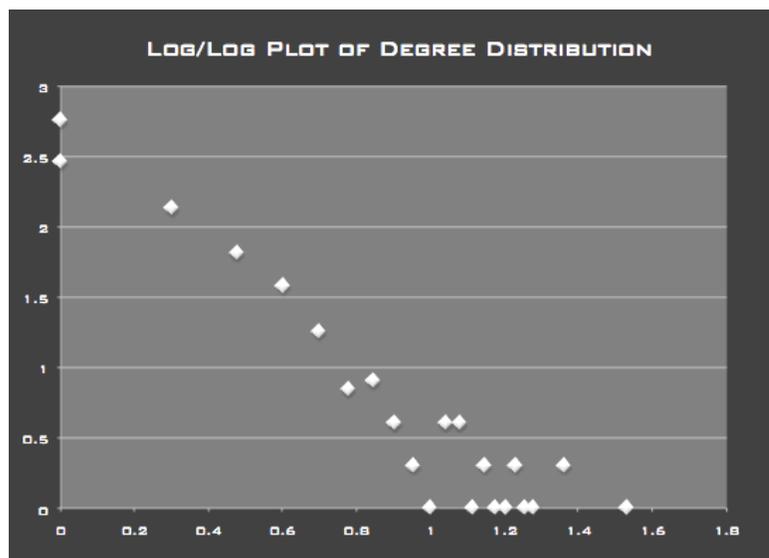
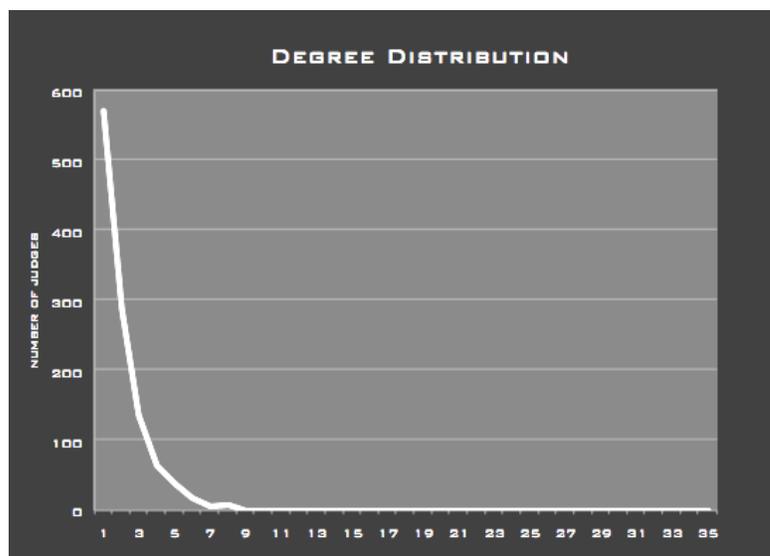


Table 3.2 provides an alternative presentation of the degree skewing in the judicial social network.³²⁶ We excluded the Supreme Court Justices from the analysis for previously stated reasons. Although the district and circuit partitions may be of individual interest, the aggregate frequency distribution provides the most useful information about the entirety of the interactions. For instance, the “aggregate” column exhibits a rapid decline of degree frequency over the first five classifications.

Table 3.2: Degree Distribution

% of Judges	District Judges	Circuit Judges	Aggregate
with Degree 0	57.43%	23.20%	50.04%
	(522)	(58)	(580)
with Degree 1	25.85%	21.60%	24.16%
	(235)	(54)	(280)
with Degree 2	9.90%	18.40%	11.73%
	(90)	(46)	(136)
with Degree 3	3.96%	11.60%	5.61%
	(36)	(29)	(65)
with Degree 4	1.87%	8.40%	3.28%
	(17)	(21)	(38)
with Degree 5	0.33%	6.00%	1.56%
	(3)	(15)	(18)
with Degree 6– 10 inclusively	0.55%	6.80%	1.90%
	(5)	(17)	(22)

³²⁶ See Clauset et al, *supra* note 140, at 661. These scholars observe that “the best we can typically do is to say that our observations are consistent with a model of the world in which x is drawn from a distribution of the form $p(x) = \alpha x^{-\alpha}$.” Rather than definitively conclude the degree distribution mimics the power law distribution, we adopt a grounded approach, arguing the judicial social network is highly skewed.

with Degree greater than 10	0.11%	7.6%	1.73%
	(1)	(19)	(20)
Total	909	250	1159

While both Figure 3.5 and Table 3.1 offer an initial indication of the properties of the degree distribution, the use of maximum likelihood estimation (MLE) allows for differentiation between possible distributions.³²⁷ Using MLE approach, the *alpha* for the judicial social network is $\{-2.38\}$, placing it in the traditional $2 < \alpha < 3$ interval for a power law. However, given the relatively small size of the network, it is not possible to conclusively assert that the distribution follows a power law as we cannot reject the possibility that it mimics an alternative type of highly skewed distribution.³²⁸ Despite this shortcoming, the empirical evidence presented herein is consistent with prior scholarship describing and documenting the fractal nature of the American common law and its constitutive institutions.³²⁹ Thus, we believe the extreme skewing of the judicial social network motivates the consideration of a generative process responsible for producing such inequality in social authority.

³²⁷ See Clauset et al., *supra* note 140.

³²⁸ For a history and description of a subset of possible distributions, see Michael Mitzenmacher, *A Brief History of Generative Models for Power Law and Lognormal Distributions*, 1 INTERNET MATHEMATICS 226 (2004).

³²⁹ For the original invocation of the concepts of fractal geometry, see J. M. Balkin, *The Promise of Legal Semiotics*, 69 TEX. L. REV. 1831, 1835–36 (1991); J. M. Balkin, *The Crystalline Structure of Legal Thought*, 39 RUTGERS L. REV. 1 (1986). While Professor Balkin limits his analysis to the structure of legal argumentation, a growing set of empirical scholarship documents this fractal or crystalline nature of self-organization within legal systems. See, e.g., Leicht et al., *supra* note 12; Post & Eisen, *supra* note 111; Smith, *supra* note 12.

Preferential Attachment as a Possible Generative Process?

Most networks form, grow and change in relationship with their respective environments. Network creation is commonly referred to as a generative process. Given the dynamic nature of network formation and information flow, static network visualizations such as those offered herein represent a mere snapshot of a more dynamic landscape.³³⁰ Although this dynamism complicates the identification of the process responsible for producing particular networks, there exist several common generative processes, each of which have characteristics that are observable in the snapshots of the network structures.³³¹ Namely, there are distinct micro-mechanisms that produce classic structures such as Erdos-Renyi random graphs, small-world networks, highly clustered graphs, and scale-free networks grown through processes of preferential attachment.³³²

If our micro-level clerk movements reasonably operationalize social prestige, then the highly skewed degree distribution is substantively interesting because it helps identify the probable generating process responsible for producing the judicial social network. Given the skewing of the degree distribution and the aforementioned alpha level, we believe a process of preferential attachment analogous to the model outlined by physicists Barabási and Albert (BA) is a possible mechanism responsible for generating the judicial social

³³⁰ For more of an applied description of how those dynamics could influence common law development, see generally Katz, Stafford & Provins, *supra* note 12.

³³¹ *Id.*

³³² *Id.*

network. Namely, graphs generated using the BA model display a particular type of extreme skewing similar to Figure 5.³³³ The specific process described by Barabási and Albert yields a “scale-free” network whose degree distribution is power law distributed.³³⁴

In the BA model, the number of connections a node displays at a given moment is a function of the number the node possessed in earlier time periods.³³⁵ Thus, the distribution of connections in a system organized under such conditions is highly

³³³ For a simulation of a preferential attachment process written in Net Logo, see <http://ccl.northwestern.edu/netlogo/models/PreferentialAttachment>.

³³⁴ Preferential attachment is exceedingly similar to a Yule-Simon process. For primary materials on Yule-Simon processes, see, for example, Herbert A. Simon, *On a Class of Skew Distribution Functions*, 42 *BIOMETRIKA* 425 (1955); George Udny Yule, *A Mathematical Theory of Evolution, Based on the Conclusions of Dr. J. C. Willis, F.R.S.*, 213 *PHIL. TRANSACTIONS OF THE ROYAL SOC'Y OF LONDON* 21 (1925). In a “rich get richer” Yule process the percentage of return an individual receives is positively related the quantity of money that person is able to invest. Thus, a system organized under such conditions is often described as extremely sensitive to its initial starting conditions as those with large initial endowments are able to extend their relative advantage over those at a lower initial starting investment. With respect to the federal judicial actors, it appears that social or professional influence may in part grow in this manner. Namely, individual agents who stochastically or strategically garner initial advantage in social standing appear able to extend that advantage in subsequent periods. In a manner similar to that depicted herein, a Yule process generates a relatively small number of agents occupying vastly disproportionate influence to their colleagues. As described in the literature, there are slight differences between the original Yule process and the BA preferential attachment model. However, as physicist Mark Newman explains, “the important point is that the Yule process is a plausible and general mechanism that can explain a number of the power-law distributions observed in nature and can produce a wide range of exponents to match the observations by suitable adjustments of the parameters. For . . . citations, city populations and personal income, it is now the most widely accepted theory.” See M. E. J. Newman, *Power Laws, Pareto Distributions and Zipf's Law*, 46 *CONTEMP. PHYSICS* 323, 343 (2005).

³³⁵ Consider the approach offered by Nadine Baumann and Sebastian Stiller, *Network Models*, in *NETWORK ANALYSIS: METHODOLOGICAL FOUNDATIONS* 341 (Ulrik Brandes & Thomas Erlebach eds., 2005). Namely, if represents the history of some graph, whereby G is the structure of that graph at every point in time (t) when some vertex (v) is added to the graph with a given number of connections (m) to a vertex (i) in the set of all vertices (V) driven by a probability distribution based on the degree distribution of the graph at the previous point in time ($t-1$). offers a state to state framework which can recursively define the sets and distributions of moments in time of a dynamic network. Following Baumann and Stiller, we can use to probabilistically classify the generative processes of network snapshots. *Id.* at 349.

susceptible to its initial starting conditions. For example, consider a network that has only four nodes: A & B and C & D, where A is connected to B and C is connected to D. Next, assume node E enters the network and its probability of attachment to the AB community is equal to that of the CD community. The key to the model is the role of subsequent entrants such as node F, G, H, and beyond. As these later nodes enter the network, their probability of attachment is directly impacted by the community initially selected by node E.³³⁶

The precise conditions contained in the Barabási & Albert model are, of course, highly stylized.³³⁷ One of the points of departure between the BA model and an empirical network, such as the judicial social network, is the interaction between motivations of actors and the institutions that govern the entrances and exits. Additionally, most social

³³⁶ For further information on this generative process and the ubiquity of highly skewed networks see Albert-László Barabási & Eric Bonabeau, *Scale-Free Networks*, 288 SCI. AM. 60 (2003); Chavdar Dangkalchev, *Generation Models for Scale-Free Networks*, 338 PHYSICA A 659 (2004); S. N. Dorogovtsev, J. F. F. Mendes, & A. N. Samukhin, *Structure of Growing Networks with Preferential Linking*, 85 PHYSICAL REV. LETTERS 4633 (2000); M. E. J. Newman, *The Structure and Function of Complex Networks*, 45 SOC'Y INDUS. & APPLIED MATHEMATICS REV. 167 (2003).

³³⁷ Following its publication, several interesting extensions of the initial preferential attachment model have been offered. With respect to initial attractiveness, Buckley and Osthus assigned measures of attractiveness that increase or decrease the likelihood of a new connection. Initial attractiveness is a useful manner to operationalize the additional characteristics that may affect the likelihood of gathering connections. See Pierce G. Buckley & Deryk Osthus, *Popularity Based Random Graph Models Leading to a Scale-Free Degree Sequence*, 282 DISCRETE MATHEMATICS 53 (2004). Consider also the copying model where vertex (v) is selected and a clone of that vertex, (v'), is made. While v' initially possesses all of the connections held by vertex v , the model probabilistically rewires v' . The copying model and its extensions implement a rich-get-richer processes where explicit knowledge of degree is not required. See, e.g., Jon M. Kleinberg et al., *The Web as a Graph: Measurements, Models, and Methods*, in 1627 LECTURE NOTES IN COMPUTER SCIENCE 1 (G. Goos et al. eds., 1999).

networks do not grow from initially random conditions. For instance, over the time period in question, the number of federal judges is roughly static and entry and exit from the network is fairly rare. As the network changes over time, agents enter and exit the network and connections form and dissolve. Additionally, when new jurists enter the network, it is unlikely they can directly connect to socially prominent actors. Thus, while it is rare to observe empirically a social system that meets the strict BA criteria, the model still offers insights that are useful for considering processes that generate highly skewed degree distributions.

On the key dimensions, there are significant similarities between the micro-level mechanism outlined in the BA model and the process that appears to generate the distribution of authority within judicial social network. Namely, the driving force generating the observed structure is the micro-motivations of the actors. In general, all else equal, both jurists and clerks are upwardly mobile and direct their efforts toward connections with socially prominent agents. The skewed degree distribution is an artifact of this effort. In sum, if social connections among federal judicial agents are generated through preferential attachment or some allied process, this implies social prestige is sensitive to initial conditions where jurists will tend to connect to the set of jurists who are already socially prominent. If those empirically modeled connections are professional relationships that connote substantive influence, this will produce a small number of jurists with substantive authority that dramatically exceeds their institutional position.

Doctrinal Phase Transition . . . Is the Common Law a System Self-Organized at a Position of Criticality?

While the use of our proxy measure and our static representation of the judicial social network limits our ability to formally adjudicate questions of growth and influence, the findings offered herein should motivate further empirical investigation—particularly analysis incorporating jurist citations and decisions. Among possible research questions, one worthy of detailed investigation is whether the American common law is a system self-organized at a position of criticality.

Self-organized criticality (SOC) has been linked to earthquake magnitude, the size of forest fires, turbulence in financial markets, and biological evolution. SOC describes a process whereby social and physical systems organize on the precipice of great change.³³⁸ Such self-organization does not require an exogenous authority to structure the system. Instead, the structure that manifests is the emergent property of the local interactions between individual agents.

The sand pile model described in the work of the late physicist Per Bak offers one classic illustration of the phenomena.³³⁹ Imagine randomly dropping grains of sand onto a

³³⁸ See PER BAK, *HOW NATURE WORKS: THE SCIENCE OF SELF-ORGANIZED CRITICALITY* (1996); Per Bak et al., *Self-Organized Criticality: An Explanation of 1/f Noise*, 59 *PHYSICAL REV. LETTERS*, 381–84 (1987).

³³⁹ PER BAK, *supra* note 154, at 52.

flat surface.³⁴⁰ Eventually, a pile will form which will start flat, but with time will grow steeper. At irregular intervals, avalanches of sand will flatten the base allowing the pile to grow again. In their work, Bak and colleagues kept track of the size of such avalanches and determined there was no typical or average size of an avalanche because the avalanche sizes followed a power law distribution.³⁴¹ Although the most frequent avalanches involved a single grain or two, the avalanche could also encompass thousands or tens of thousands of grains. Given such large avalanches were rare, significant numbers of computational trials were necessary in order to properly specify the underlying probability distribution.

Through these trials, certain informative trends became evident. The steeper the angle of the sand pile and the greater the amount of sand, the more likely a catastrophic avalanche would occur. To better illustrate the model, Bak and colleagues offered a contour plot where the pile was shaded according to steepness. As the angle increased the computer shaded the hill red to indicate a critical state. When the pile stood in some sort of equilibrium and thus was less likely to be subject to greater avalanches, the computer shaded the pile green. In general, the piles would begin green and then gradually shade red in advance of an avalanche. As the number of grains increased, so too would the

³⁴⁰ For a computational simulation see <http://vlab.infotech.monash.edu.au/simulations/non-linear/dendritic-growth/> (last visited Jan. 2, 2009).

³⁴¹ It is worth noting that subsequent scholarship has challenged the sand pile model, arguing only rice piles where rice demonstrates a large aspect ratio actually display SOC. See Vidar Frette et al., *Avalanche Dynamics in a Pile of Rice*, 379 NATURE 49, 49 (1996).

number of red spots. If a grain were to fall on the green plateaus, the likelihood of a cataclysmic avalanche was small, but if that same grain were to fall near the bright red peak, an avalanche could spread to other peaks, flattening the entire pile.

The sand pile example is illuminating as the static, instantaneous representation of the model might indicate a system in equilibrium. However, time revealed a dynamic non-linear landscape—one that would eventually jettison anything that might be characterized as equilibrium—and exposed a system on the precipice of great change. Given that highly skewed system level characteristics tend to emerge in systems self-organized criticality, we pose the question of whether SOC represents a possible evolutionary model for the American common law and its constitutive institutions.

PART IV. FROM MICRO TO MACRO AND BACK AGAIN: PEER EFFECTS, EMERGENCE AND CONVERGENCE IN A FEDERAL JUDICIAL HIERARCHY

Whether the actors in the federal judiciary self-organize at positions of criticality or whether preferential attachment or some allied process is responsible for generating the distribution of social authority, the evidence of extreme skewing presented herein is consistent with a system in which “peer effects” are likely to influence substantive outcomes. Whether invoking illusions to fireflies, sand piles, or automobile traffic, the overall goal of this endeavor is to enrich existing theories of judicial decision making through a formal discussion of judicial “peer effects.” While there are important properties drawn from each major judicial decision making theory, better understanding of the manner in which social factors structure the global outputs for the federal judicial

hierarchy is arguably needed. As discussed in allied work, we believe “the manner which doctrine changes cannot be divorced from the manner of self-organization that judicial actors embrace. The micro-motives of federal jurists and the professional and social interactions between jurists, at least in part, help generate systemic changes in the common law.”³⁴²

Judicial decision-making is decision-making in a hierarchy. Across all the actors and opinions, particularly those produced by lower courts, understanding why certain individuals and cases come to be privileged is a non-trivial enterprise. An important precursor to gaining leverage on “peer effects” is characterizing the social structure in which actors operate. Following on Judge Posner’s discussion of “reputation,” as well as other literature discussing prestige and influence, it is difficult to deny a role for social factors. Simply put, social factors “matter” and as such the federal judiciary is simultaneously marked by both emergence and convergence. Despite the widespread agreement, within the bounded range of legal discourse, there are still periods of non-linear change where the rise of new interpretative approaches is almost certainly supported by structurally important actors who champion a particular legal rule.³⁴³ Table 1 *infra* offers a list of such structurally important actors as measured through different network statistics.

³⁴² See Katz, Stafford & Provins, *supra* note 12, at 979.

³⁴³ See Leicht, *supra* note 12.

In all, despite the sorting issues associated with the law clerk market, we believe the traffic of law clerks provides significant insight into the relative clout of actors in the judicial hierarchy. While existing methods relying exclusively upon citation counts or subjective evaluations certainly furthered collective understanding about questions of social stature, these approaches did not bring complete closure to the debate. We recognize that this article also fails to completely adjudicate all open questions. However, it advances the literature by offering a graph-theoretic approach to formalize discussion of concepts such as social position and social structure.

A significant number of individual-level theories of judicial decision-making—including behavioral and strategic theories—purport to provide a complete view of judicial decision-making. Other scholarship, such as those offered by the historical institutionalists, emphasizes the Court’s constitutive features and challenges strategic theories arguing that macro patterns of judicial decisions are inconsistent with observed macro-level judicial outputs. Our emphasis on judicial “peer effects” is an attempt to fill the void in these respective theories, arguing the existing social structure of the hierarchical federal judiciary in part explains how an existing set of individual micro-motives map to the aggregate macro-behavioral judicial outcomes.³⁴⁴ Namely, while partisan policy preferences, strategic and other considerations are certainly important, so too are social factors. If judicial decision-making is in part socially constituted, then

³⁴⁴ See Schelling, *supra* note 17.

consider this an investigation of the relevant architecture. Scaffolding comes in a variety of flavors and different structures consequence outcomes in different manners. As such, we believe the public law literature should embrace a variety of complex systems based approaches including, but not limited to, network analysis.

APPENDIX 3.1: SAMPLE OF THE KATZ, STAFFORD & PROVINS DATASET

Year	Clerk Name	Under-graduate	Law School	Judge Name	Judge ID
1995	Yoo, Christopher S.	Harvard	Northwestern	Randolph, A. Raymond	12109
1995	Metzger, Gillian E.	Yale	Columbia	Wald, Patricia M.	18260
2000	Van Houwelling, Molly S.	Michigan	Harvard	Boudin, Michael	22750
2000	Seinfeld, Gil	Harvard	Harvard	Calabresi, Guido	23155
2000	Stras, David	Kansas	Kansas	Luttig, J. Michael	22225
2002	Prescott, J. J.	Stanford	Harvard	Garland, Merrick B.	30168
1998	Tushnet, Rebecca L.	Harvard	Yale	Becker, Edward R.	590
1996	Gulati, Mitu	Chicago	Harvard	Alito, Samuel A.	127
1998	Zearfoss, Sarah	Bryn Mawr	Michigan	Ryan, James L.	13110
2000	Milani, Anup	Georgetown	Chicago	Williams, Stephen F.	20460

APPENDIX 3.2: FROM A RING LATTICE TO AN ENERGIZED NETWORK

Given the number of nodes in the judicial social network, the applied graph theory literature is somewhat indifferent³⁴⁵ as between the application of the Kamada-Kawai³⁴⁶ or Fruchterman-Reingold³⁴⁷ visualization algorithms. In Figure 3.6, we provided both a wide and close view of the network following the application of the respective algorithm. While there exist a number of nuanced distinctions between placement algorithms, the primary differences in their approaches lie in their calculation of the optimal distance for

³⁴⁵ See WOUTER DE NOOY, ANDREJ MRVAR & VLADIMIR BATAGELJ, EXPLORATORY SOCIAL NETWORK ANALYSIS WITH PAJEK 17 (2005) (discussing the proper application of competing graph visualization algorithms).

³⁴⁶ See Kamada & Kawai, *supra* note 126, at 3–5. Kamada-Kawai define energy as follows:

$$E = \sum_{i=1}^{n-1} \sum_{j=i+1}^n 1/2 k_{i,j} (|p_i - p_j| - l_{ij})^2 \text{ where } p_k \text{ is the position of vertex } k, l_{ij} = c \cdot d_{ij} \text{ is proportional to the}$$

topological distance d_{ij} of vertex i and j . *Id.* at 3. Kamada-Kawai uses a heuristic approach that individually selects vertices with the maximum gradient value of

$$\Delta_m = \sqrt{\left(\frac{\partial E}{\partial x_m}\right)^2 + \left(\frac{\partial E}{\partial y_m}\right)^2}. \text{ } Id. \text{ at 5.}$$

³⁴⁷ See Fruchterman & Reingold, *supra* note 127. Fruchterman & Reingold use an alternative heuristic approach to force-directed layout. The basic idea is to just calculate the attractive and repulsive forces at each node independently and to update all nodes iteratively.

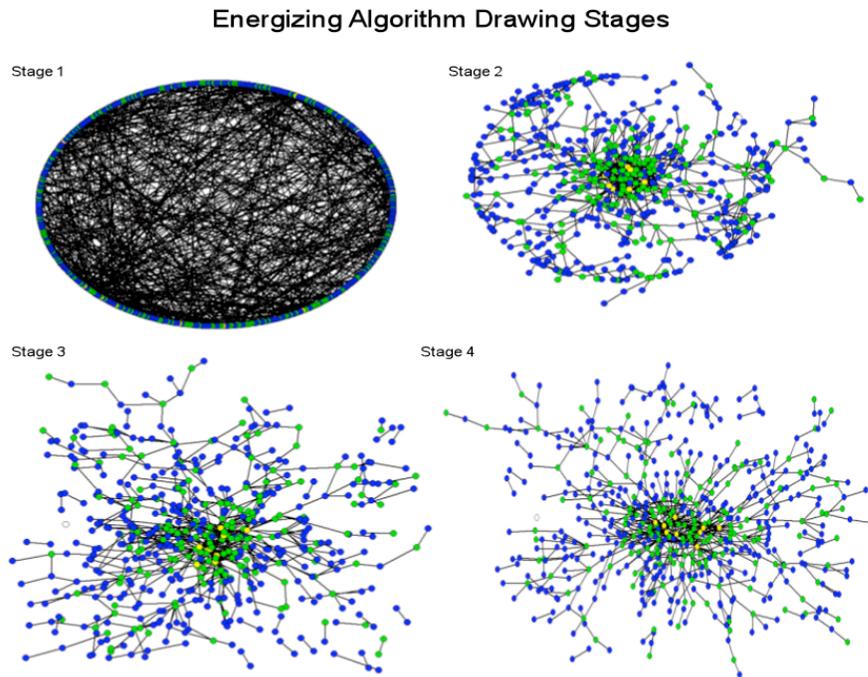
The Attractive Force is defined as: $f_a(x) = \frac{x^2}{k}$ where k is selected as $k = \sqrt{\frac{area}{|V|}}$.

The Repulsive Force is defined as: $f_r(x) = \frac{k^2}{x}$.

The maximum displacement for each node in a given iteration of the algorithm is limited through a constant. To account for the removal of nodes at each iteration, this constant is consistently decreased.

edge length, interpretation of Hooke's Law,³⁴⁸ and the time iterations until the automated drawings cease.

Figure 3.6: Energizing Algorithm Drawing Stages



The above Kamada-Kawai visual is a useful depiction of how the energizing algorithms process the information contained in the adjacency matrix to produce the visual depiction of a network. Stage 1 reflects an initial representation of the information on a random circular ring lattice. Stage 2 represents the early stage of the Kamada-Kawai spreading algorithm where certain nodes are fixed based on their centrality. Additionally,

³⁴⁸ Using Hooke's Law, a spring force can be approximated by $F = k(len - len_0)$ where len_0 is the length of the spring at rest.

nodes that are highly connected are pulled together while other less connected nodes begin to repel. Although the graph is in flux, a subset of the graph still maintains its initial circular structure. By Stage 3, the graph is no longer circular. However, the connections appear long and are thus strained according to Hooke's Law. In Stage 4, the graph has reached a degree of equilibrium as connection lengths are balanced between the forces that attract and repel.

CHAPTER FOUR

NETWORK ANALYSIS REVEALS THE STRUCTURAL POSITION OF FOREIGN LAW IN THE EARLY JURISPRUDENCE OF THE UNITED STATES SUPREME COURT¹

The foreign sources debate is a contemporary normative debate that has captured the attention of many social scientists and legal scholars.² In reduced form, the controversy turns upon whether in interpreting the U.S. Constitution it is appropriate to consider the views of foreign legal sources. Commentators have criticized the usage of foreign law in Supreme Court decisions - deriding it as new³ and unprecedented.⁴ While the debate is

¹ A previous version of this chapter was presented at the 2011 Meeting of the Society for Evolutionary Analysis in Law (SEAL 2011 Loyola – Los Angeles).

² See e.g. Timothy Kuhner, *The Foreign Source Doctrine: Explaining the Role of Foreign and International Law in Interpreting the Constitution*, 75 U. Cin. L. Rev. 1389 (2007); Austen L. Parrish, *Storm in a Teacup: The U.S. Supreme Courts Use of Foreign Law*, U. Ill. L. Rev. 637 (2007); Mark Wendell DeLaquil, "Outsourcing Authority?" *Citation to Foreign Court Precedent in Domestic Jurisprudence: Foreign Law and Opinion in State Courts*, 69 Alb. L. Rev. 697 (2006); Steven G. Calabresi, *A Shining City on a Hill: American Exceptionalism and the Supreme Court's Practice of Relying on Foreign Law*, 86 Bos. Univ. L. Rev. 1335 (2006); Steven G. Calabresi & Stephanie Dotson Zimdahl, *The Supreme Court and Foreign Sources of Law: Two Hundred Years of Practice and the Juvenile Death Penalty Decision*, 47 William & Mary L. R. 743 (2005); Joan Larsen, *Importing Constitutional Norms from a "Wider Civilization;" Lawrence and the Rehnquist Court's Use of Foreign and International Law in Domestic Constitutional Interpretation*, 65 Ohio St. L.J. 1283 (2004); Gerald Neuman, *Agora: The United States Constitution and International Law: The Uses of International Law in Constitutional Interpretation*, 98 Am. J. Int'l L. 82 (2004); Michael D. Ramsey, *Agora: The United States Constitution and International Law: International Materials and Domestic Rights: Reflections on Atkins and Lawrence*, 98 Am. J. Int'l L. 69 (2004).

³ A careful review of the historical record demonstrates that the foreign sources debate is almost as old as the republic itself. As Professor Seipp has noted "During the early codification movement three states – New Jersey in 1799, Kentucky in 1808, and Pennsylvania in 1810 – passed statutes specifically forbidding citation of English cases decided after July 4, 1776. The statutes did not last long in force, and there is some evidence that they were not enforced. In New Hampshire, a rule of court was adopted forbidding English citations." However, even the Pennsylvania statute approved of the use of post-1776 maritime law. See David Seipp, *Our Law, Their Law, and the Citation of Foreign Law*, 86 B.U. L. Rev 1417 (2006).

⁴ For example, the response has been quite strong particularly from various members of Congress. See Seipp, *supra* note 2 citing American Justice for American Citizens Act, H.R. 1658, 109th Cong. § 2 (2005);

particularly focused upon the modern application of foreign law, commentators have not confined their discussion to application of foreign law in the modern era. Indeed, while the normative debate is robust and ongoing,⁵ the discourse surrounding the appropriate use foreign sources is compelling because it exposes broader questions regarding the role of foreign legal sources in the development of American law. For example, how “American” is American jurisprudence? What precisely is our experience with invoking foreign legal sources?⁶

In response to the controversy generated in the aftermath of the Supreme Court’s decisions in *Roper v. Simmons*⁷ and *Lawrence v. Texas*⁸ several scholars explored the extent to which the Supreme Court has cited foreign law as at least a partial guide its

House Resolution on the Appropriate Role of Foreign Judgments in the Interpretation of the Constitution of the United States: Hearing on H.R. Res. 97 Before the Subcomm. on the Constitution of the H. Comm. on the Judiciary, 109th Cong. 2 (2005). H.R. Res. 97, 109th Cong. (2005) (“Whereas the Supreme Court has *recently relied* on the judgments, laws, or pronouncements of foreign institutions to support its interpretations of the laws of the United States, most recently in *Lawrence v. Texas*, 123 S.Ct. 2472, 2474 (2003) . . .”) (emphasis added). See also 151 Cong. Rec. S3113, 3127 (daily ed. Apr. 4, 2005) (statement of Sen. Cornyn) (“In a series of cases over the past few years our courts *have begun to tell us* that our criminal laws and our criminal policies are informed not just by our Constitution and by the policy preferences and legislative enactments of the American people through their elected representatives, but also by the rulings of foreign courts.”) (emphasis added)).

⁵ The debate has inspired many law review articles and even a public debate between two sitting justices. See *Scalia-Breyer Debate on Foreign Law* (American University, Jan. 13, 2005) available at <http://www.freerepublic.com/focus/f-news/1352357/posts>

⁶ As Professor Seipp notes “[T]he objection to citation of foreign law is bad history because it is a new complaint (that has been made to appear old) about an old practice (that has been made to appear new).” While his position is certainly supported by the balance of this article, there exists a general lack of *systematic evidence* regarding the historical practices of the early United States Supreme Court.

⁷ *Roper v. Simmons*, 543 U.S. 551 (2005)

⁸ *Lawrence v. Texas*, 539 U.S. 558 (2003)

decisions. Two leading papers - Calabresi & Zimdahl (2005)⁹ and Seipp (2006)¹⁰ - surveyed the history of the Court and revealed that the Court's practice of citing foreign law is actually longstanding. Their combined analysis demonstrates that some the Court's more prestigious Justices and some of its better-known decisions draw at least partial support from foreign legal sources.

As an initial inquiry and a response to those that who argued that references to foreign law were somehow unprecedented, both Calabresi & Zimdahl (2005) and Seipp (2006) succeed, unambiguously.¹¹ However, as a disciplined and systematic exercise their approach has real shortcomings. Specifically, by selecting breadth over depth the authors are unable to answer a number of the substantive questions they raise in their respective papers. For example, after delimiting the proper scope for the usage of foreign legal material, Calabresi & Zimdahl (2005) expressed sympathy with the spirit of Justice Scalia's arguments and alarm over the apparent increase in citations of foreign law, especially in recent years. Yet, their concern is dependent on an accurate knowledge of the frequency of citations to foreign law across different periods in the Court's history. The analysis offered in their work is simply unable to assess this question for *any* period in the Court's history. Simply put, magnitude claims cannot be made without a

⁹ See Steven G. Calabresi & Stephanie Dotson Zimdahl, *The Supreme Court and Foreign Sources of Law: Two Hundred Years of Practice and the Juvenile Death Penalty Decision*, 47 William & Mary L. R. 743 (2005).

¹⁰ See Seipp *supra* note 2.

¹¹ See Calabresi & Zimdahl *supra* note 7.

systematic approach designed to identify whether the rate of foreign legal citations increased, decreased or remained constant.

Seeking to apply a systemic approach to the question, this paper takes an alternative method - one that privileges depth over breadth. Relying upon the full corpus decisions of through the end of Chief Justice Marshall's term (1791 - 1835), this study both identifies and classifies the more than 35,000 references contained therein. This analysis highlights both the extent of reference to foreign legal sources and situates these references in the broader universe of cited sources. Justices on the early United States Supreme Court relied upon a variety of sources as evidence in support of their arguments. Rather than rely upon lower courts or the internal logic of its decisions, the early United States Supreme Court built its jurisprudence by jumpstarting it from foreign legal commentators and sources.

While many scholars have identified specific qualitative instances where the Court invoked some foreign legal case or commentator, the lack of a rigorous and overarching framework prevents any form of systematic evaluation. For example, how important are these early foreign infused cases? Are they core or are they peripheral? To consider these and other related questions, the analysis offered in this paper both offers descriptive data regarding the magnitude of citations to foreign source in the early Court and leverages various tools of network science to consider the "structural importance" of these foreign infused decisions. While the empirical results are perhaps relevant to the current debate regarding the Supreme Court's reliance upon foreign sources, there is

something far more fundamental at stake. Specifically, this paper offers an initial sketch of the legal genome project - a theory of common law evolution.

DATA ACQUISITION

Data for this project was acquired from two sources - Lexis-Nexis and bulk.resource.org.¹² We acquired a full text decision for every United States Supreme Court decision recorded in the United States Reports from 1 U.S. 1 - 34 U.S. 711.¹³ This period covers all 1,021 decisions rendered from the start of the Jay Court through the end of John Marshall's term as Chief Justice (1791 – 1835). Many scholars identify this as a critical period in Supreme Court history as under the leadership of Justice Marshall (1801-1835) the Court solidified its position as an independent and co-equal branch of government.¹⁴ In particular, the Court authored a number of important rulings on topics including federalism and enumerated powers thereby developing the cannon upon which future courts would rely.¹⁵

¹² We cross-validated our list of decisions using both sources. While it is possible to rely exclusively on the content offered by <http://bulk.resource.org> the representation offered by Lexis including its digital demarcations and tagging proved to be very helpful. Free access to the relevant information is available at <http://ftp.resource.org/courts.gov/c/US/>.

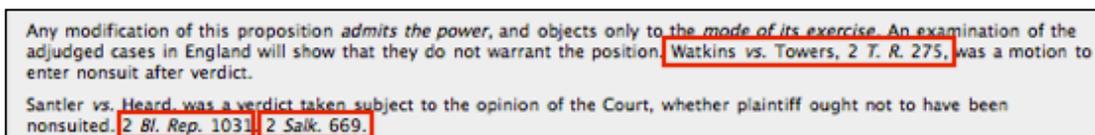
¹³ We excluded from our analysis the other decisions included in the United States Reports including those authored by the Supreme Court of Pennsylvania.

¹⁴ Scholars have long debated Chief Justice Marshall's role in the development of the modern court.

¹⁵ For a visual depiction of the development of the cannon of the early United States Supreme Court see Michael Bommarito, Daniel Martin Katz, Jon Zelner & James H. Fowler, *The Development of Structure in the Citation Network of the United States Supreme Court — Now in HD!* available at <http://computationallegalstudies.com/2010/02/11/the-development-of-structure-in-the-citation-network-of-the-united-states-supreme-court-now-in-hd/>.

For each of the decisions in our selected corpus, we recorded the identity of each citation and the location of the citation within each case. Figure 4.1 offers an example of our in-text citation identification using selected text from the Court's decision in *Doe on the Demise of Elmore v. Grymes*.¹⁶

Figure 4.1: An Example of Citation Identification



Any modification of this proposition admits the power, and objects only to the mode of its exercise. An examination of the adjudged cases in England will show that they do not warrant the position. Watkins vs. Towers, 2 T. R. 275. was a motion to enter nonsuit after verdict. Santler vs. Heard. was a verdict taken subject to the opinion of the Court, whether plaintiff ought not to have been nonsuited. 2 Bl. Rep. 1031 2 Salk. 669.

After flagging all formal and informal references contained within our corpus, we next categorized each citation using one of 24 different citation source codes. In addition, we included an explicit binary indicator 0=domestic, 1=foreign. These combined classifications allow us not only to build a more accurate picture of the role that foreign legal material played in the early years of the Court, but will also provide a glimpse toward the different forms of source material that Justices found suitable to use

¹⁶ *Doe on the Demise of Elmore v. Grymes*, 26 U.S. 469 (1828).

as evidence in support of their arguments.¹⁷ Table 4.1, displayed below, offers each of the citation codes we applied in this study.¹⁸

Table 4.1: Citation Source Codes

1	<i>Supreme Court of the United States</i>
2	<i>Federal Court of Appeals</i>
3	<i>State Court</i>
4	<i>Other Domestic Court</i>
5	<i>Federal Statute</i>
6	<i>State Statute</i>
7	<i>Domestic Legal Commentator / Treatise</i>
8	<i>Foreign Legal Commentator</i>
9	<i>English Court</i>
10	<i>French Court</i>
11	<i>Another Foreign Court</i>
12	<i>Foreign Statutes and Other Legal Materials</i>
13	<i>Treaties</i>
14	<i>Roman Law</i>
15	<i>Constitution of the United States</i>
16	<i>Law of Nations (jus gentium)/ General Law of War / Law of Prize</i>
17	<i>Federalist Papers</i>
18	<i>Domestic General Books (Non-Legal commentaries, compendiums, etc.)</i>
19	<i>Foreign General Books (Non-Legal commentaries, compendiums, etc.)</i>
20	<i>Speeches / Public Messages / Presidential Statements & Messages / State Letters</i>
21	<i>State Constitutions</i>
22	<i>Writs</i>
23	<i>Executive Orders / Pardons</i>
24	<i>Declaration of Independence / Articles of Confederation</i>

The classification framework provided in the database is useful not only for the analysis presented herein but also could serve as a framework to make comparisons

¹⁷ The range of materials used by the early Court was quite substantial. In addition, a number of the citation formats used by the Court has since fallen out of favor. The Google Book repository as well as various indexes of legal abbreviations were invaluable in identifying the source material relied upon by the early Court.

¹⁸ It is, of course, possible to aggregate/collapse some of these citation types. Given the one-way nature of this possibility (i.e. it is far easier to aggregate than disaggregate), we selected relatively granular citation source codes.

across different periods in the Court’s history. For example, this taxonomy could be applied systematically investigate whether the overall frequency of citations has changed over time, whether citation to different sources has changed over time and the time varying differential citation propensities of various members of the Court.

A SUMMARY PORTRAIT OF THE DATASET

We begin our analysis by providing some summary information regarding the dataset. Table 4.2 offers a variety of summary statistics including the total number of cases, total number of citations and the average foreignness of a case in this time period.

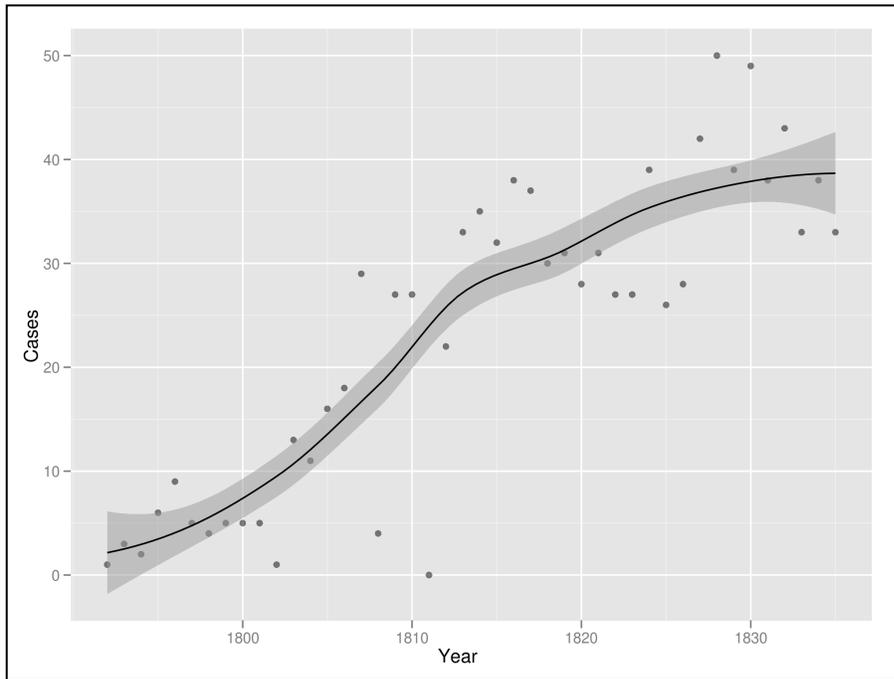
Table 4.2: Summary Statistics (1791-1835)

<i>Total Cases</i>	1,021
<i>Total Number of Citations</i>	36,390
<i>Mean Number of Citations Per Case</i>	35.2
<i>Average % of Foreign References</i>	35.9%
<i>% of Foreign References in the Median Case</i>	28.5%

While Table 2 provides an aggregate portrait of the dataset, it is also useful to explore some of the temporal patterns contained therein. Thus, Figure 4.2 displays the frequency of cases over the 1791-1835 period. It demonstrates a marked increase in the volume of cases heard by the Court during this formative period. While the case volumes are

substantially lower than those entertained by the modern Supreme Court, by the late 1820's, the court consistently considered more than 30 cases per term.

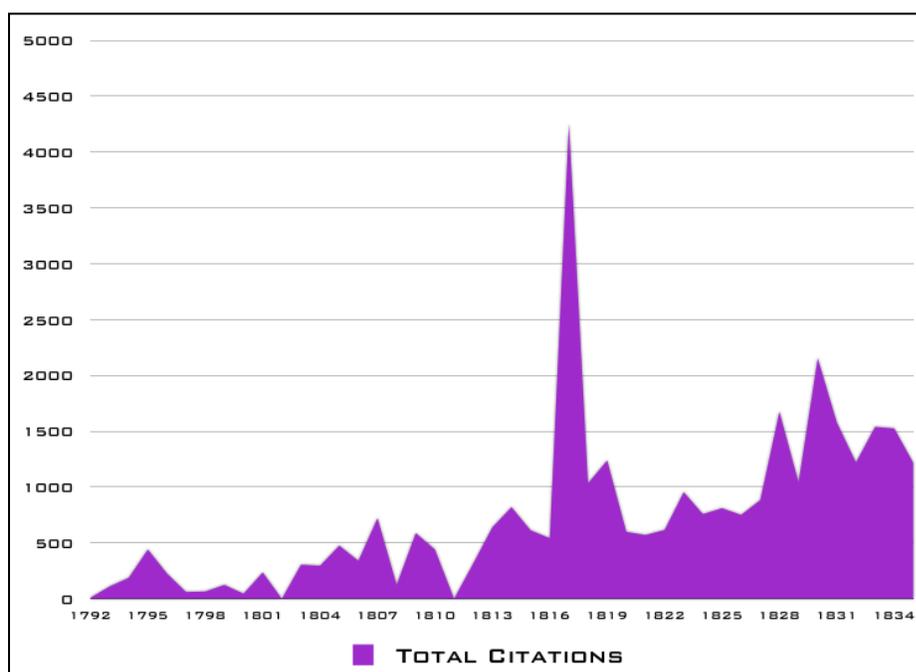
Figure 4.2: Case Frequency 1791-1835



As noted, most of the 1,021 decisions in the dataset contain references to sources such as prior decisions, statutes, treatises, legal commentators, treaties, etc. Figure 4.3, below, displays frequency of these combined citation types over the 1791-1835 period. Figure 3 reveals a significant spike in citations in the year 1817. This result is attributable to a series of maritime and prize decisions decided by the Court in the 1817 term. As previously discussed in Bommarito, Katz, Zelner & Fowler (2010) these 1817 maritime decisions were important as from a graph / structural perspective this was the first year that Supreme Court meaningfully cited its own prior decisions.

In addition to citing their own prior precedent, members of the court cited extensively the law of admiralty and developed a lengthy appendix that includes a tremendous number of foreign legal references.¹⁹ Consistent with many forms of raw data, the underlying trend can be masked by various intervening events. However, notwithstanding such intermittent variability, a trend in favor of greater citations per year is displayed. Yet, it is important to note that this raw trend is driven in part by the increases in case volume displayed in Figure 4.2 above.

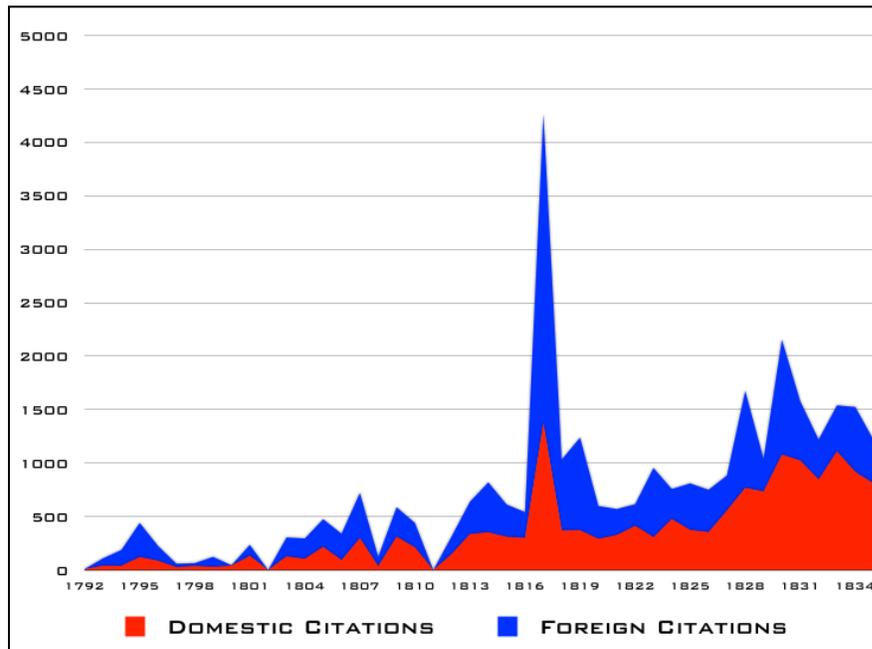
Figure 4.3: Citation Frequency 1791-1835



¹⁹ Much of this spike in citations is attributable to an Appendix included at the end of several of the Court's 1817 maritime/prize decisions. For an example, see *e.g. The Anna Maria*, 15 U.S. 327, 335 (1817).

An alternative presentation of the data is offered in Figure 4.4 below. The stackplot separates the references shown in Figure 4.3 above into two classes -- foreign law citations (blue) and citations to domestic legal sources (red). While the majority of the references in any given year are to domestic sources, in virtually every year a significant percentage of references are directed toward foreign legal sources. Indeed, for those interested in exploring the extent and nature of Court's the reliance upon foreign sources, Figure 4.4 reveals a consistent pattern.²⁰ As percentage of total citations, the final years of the Marshall (*i.e.* post 1825) witnessed a relative decline in the court's references to foreign legal sources.

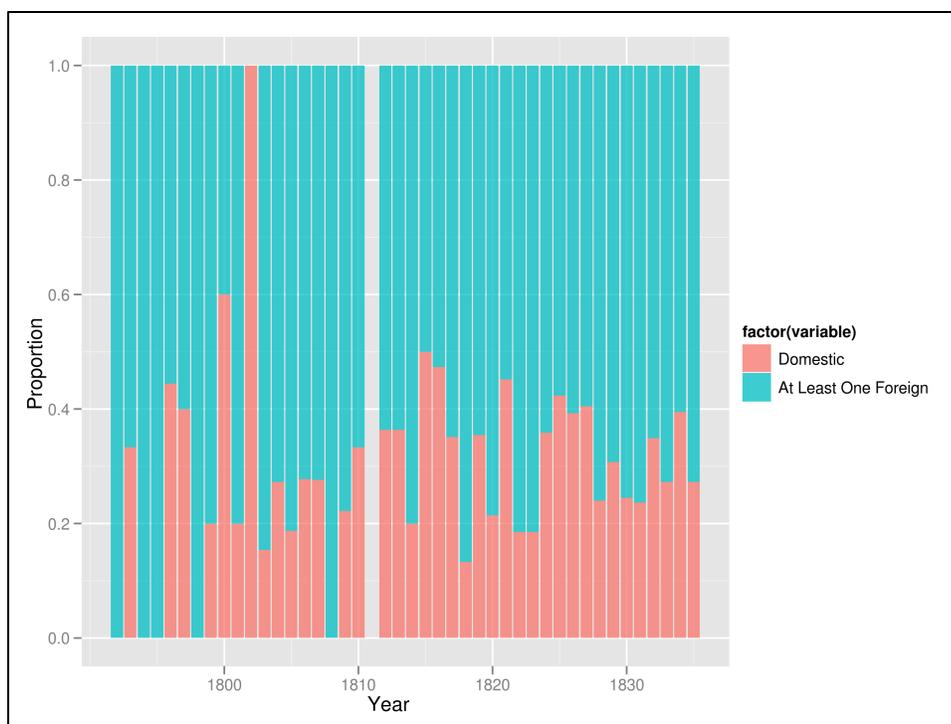
Figure 4.4: Citation Frequency (By Source) 1791-1835



²⁰ It is important to note that this is simply raw citation data and does not take account of the nature of the reference or the context in which it arose.

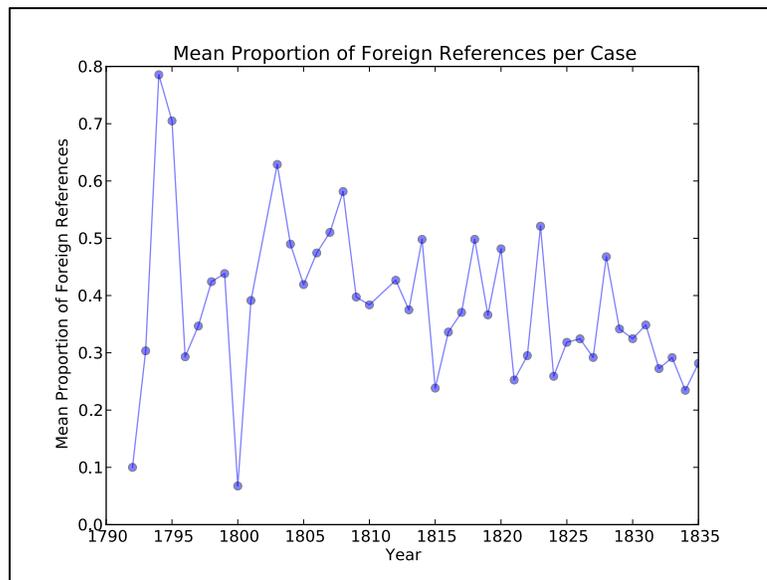
When presented with such summary or longitudinal information it is reasonable to question whether the observed trends are being driven by certain peculiarities such as a few outlying cases within a particular year, etc. To assuage such concerns, Figure 4.5 modifies the unit of analysis from years to cases within a year. Next, each case in a given year is separated into two stark classes. Within a each year cases that are entirely domestic (i.e. have zero citations to foreign law) are colored in red while cases that have at least one reference to a foreign legal are colored in blue. The results presented in Figure 4.5 below demonstrate the presence of foreign law is not reserved a few isolated cases. Rather, in most years the majority of cases feature at least some reference to a foreign legal source.

Figure 4.5: Citation Source (By Case) 1791-1835



A related pattern is displayed in Figure 4.6 below. While the mean proportion of foreign references declines in through the end of the Marshall Court, there are still a steady and non-trivial number of foreign references in the average decision. We suspect that this decline is attributable to end of the Supreme Court’s jumpstarting phase -- where the early Court felt it necessary to jumpstarting its jurisprudence from a mixture of foreign and other domestic legal sources. Although the Court could have relied entirely on either domestic legal citations and/or on the force and/or coherence of its own decision, as practical matter the Court’s early decisions on a given topic tended to build support from a variety of sources including foreign sources. Although a subject worth of subsequent study, we believe that the Court’s overall propensity to cite foreign sources continued to declined after it had reasonably developed a set of decisions that were more or less on point.

Figure 4.6: Citation Source (By Case) 1791-1835



NETWORK ANALYSIS OF THE LAW: AN OVERVIEW

While historically allied with mathematical sociology, developments in network science have been generated by a wide range of disciplines, with major recent contributions offered by fields such as applied mathematics and statistical physics.²¹ Applied graph theorists often refer to networks as dependency graphs because they formalize the underlying linkages between objects. Whether the objects in question are webpages on the internet, individuals in a social network such as Facebook or software dependences in computer programming, the study of networks is the ‘science of our times.’

Building upon the developments in this interdisciplinary field, legal scholars²² and social scientists²³ have recently begun to apply the tools of network science to bring new

²¹ See e.g. Aaron Clauset, Christopher Moore & Mark E. J. Newman, *Hierarchical Structure and the Prediction of Missing Links in Networks*, 453 *Nature* 98 (2008); Gregory Palla, Alberto Laszlo Barabási & Tamás Vicsek, *Quantifying Social Group Evolution*, 446 *Nature* 664 (2007); Michelle Girvan & Mark E. J. Newman, *Community Structure in Social and Biological Networks*, 99 *Proc. Natl. Acad. Sci. USA* 7821 (2002); Albert-László Barabási & Reka Albert, *Emergence of Scaling in Random Networks*, 286 *Science* 509 (1999); Duncan J. Watts & Stephen Strogatz, *Collective Dynamics of ‘Small World’ Networks*, 393 *Nature* 440 (1998).

²² See e.g. Daniel Katz, Joshua Gubler, Jon Zelner, Michael Bommarito, Eric Provins & Eitan Ingall, *Reproduction of Hierarchy? A Social Network Analysis of the American Law Professoriate*, 60 *Journal of Legal Education* (2011 Forthcoming); Daniel Katz & Derek Stafford, *Hustle and Flow: A Social Network Analysis of the American Federal Judiciary*, 71 *Ohio State Law Journal* 457 (2010); Daniel Katz, Derek Stafford & Eric Provins, *Social Architecture, Judicial Peer Effects and the “Evolution” of the Law: Toward a Positive Theory of Judicial Social Structure*, 23 *Geo. State L. Rev.* 975 (2008); Gregory Todd Jones, et al., *Homogeneity of Degree in Complex Social Networks as a Collective Good*, 24 *Geo. State L. Rev.* 929 (2008); Thomas A. Smith, *The Web of the Law*, 44 *San Diego L.R.* 309 (2007); James Fowler, Timothy R. Johnson, James F. Spriggs II, Sangick Jeon & Paul J. Wahlbeck, *Network Analysis and the*

insight to a variety long standing questions. Among the possible questions, one very fruitful application for the tools of network science is in the study of judicial citations and the ‘evolution’ of the common law. Indeed, a distinguishing feature of a common law system is the precedential weight that judicial actors attach to prior decisions. Judges presented with questions in a given case consider how to apply doctrines from prior cases. Disagreement often ensues as to the “proper” form of analogical reasoning that should be applied to the case at bar.²⁴

Taken in the aggregate, common law systems produce vast amounts of citation data and although there is a rich literature studying these citations,²⁵ relatively little

Law: Measuring the Legal Importance of Precedents at the U.S. Supreme Court, 15 Pol. Analysis, 324 (2007); Katherine J. Strandburg, et. al., *Law and the Science of Networks: An Overview and an Application to the "Patent Explosion"*, 21 Berkeley Tech. L.J. 1293 (2005); *How Long is the Coastline of the Law? Thoughts on the Fractal Nature of Legal Systems*, 29 J. Leg. Stud. 545 (2000). See also Frank B. Cross, Thomas A. Smith & Antonio Tomarchio, *Determinants of Cohesion in the Supreme Court's Network of Precedents*, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=924110.

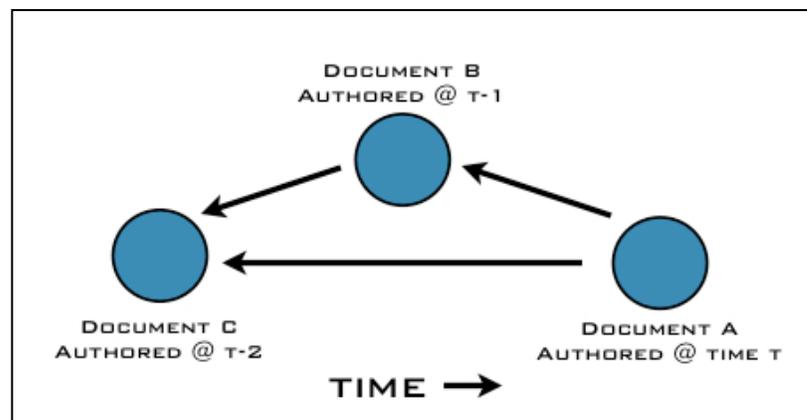
²³ See *infra* note 9 and *supra* notes 11-12.

²⁴ Analogy is at the core of legal reasoning and one way for an entrepreneurial judge to raise his/her relative standing is to develop set of novel conceptual bridges that broader community of legal actors comes to see as well-reasoned. From a graph-perspective, this sort of legal arbitrage is akin to fusing two or more otherwise unrelated decisional clusters.

²⁵ See, e.g., Frank B. Cross et al., *Citations in the U.S. Supreme Court: An Empirical Study of Their Use and Significance*, 2010 U. Ill. L. 489 (2010); Michael Abramowicz & Emerson H. Tiller, *Citation to Legislative History: Empirical Evidence on Positive Political and Contextual Theories of Judicial Decision Making*, 38 J. Legal Stud. 419 (2009); Stephen J. Choi & Mitu Gulati, *Bias in Judicial Citations: A Window into the Behavior of Judges?*, 37 J. Legal Stud. 87 (2008); Stephen J. Choi & Mitu Gulati, *Choosing the Next Supreme Court Justice: An Empirical Ranking of Judge Performance*, 78 S. Cal. L. Rev. 23 (2004); Mita Bhattacharya & Russell Smyth, *The Determinants of Judicial Prestige and Influence: Some Empirical Evidence from the High Court of Australia*, 30 J. Legal Stud. 223 (2001); Richard Posner, *An Economic Analysis of the Use of Citations in the Law*, 2 Am. L. & Econ. Rev. 381 (2000); David Klein & Darby Morrisroe, *The Prestige and Influence of Individual Judges on the U.S. Courts of Appeals*, 28 J. Legal Stud. 371 (1999); Montgomery N. Kosma, *Measuring the Influence of Supreme Court Justices*, 27 J. Legal Stud. 333 (1998); William M. Landes, Lawrence Lessig & Michael E. Solimine, *Judicial Influence: A Citation*

scholarship has applied the tools of network science.²⁶ As applied to legal citations, each reference between the various cases in the network is represented by a directed edge (arc) and each case is represented by a node. Citation networks are a special class of network called a *dynamic directed acyclic graph* (D-DAG). Figure 4.7, offers the general form representation of a D-DAG.

Figure 4.7: General Form Representation of a Dynamic Directed Acyclic Graph



Analysis of Federal Courts of Appeals Judges, 27 J. Legal Stud. 271 (1998); David Walsh, *On the Meaning and Pattern of Legal Citations: Evidence from State Wrongful Discharge Precedent Cases*, 31 L. & Soc'y Rev. 337 (1997); William Landes & Richard Posner, *Legal Precedent: A Theoretical and Empirical Analysis*, 19 J.L. & Econ. 249 (1976).

²⁶ See e.g. Michael Bommarito, Daniel Katz & Jonathan Zelner, *Law as a Seamless Web? Comparing Various Network Representations of the United States Supreme Court Corpus (1791-2005)* in PROCEEDINGS OF THE 12TH INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND LAW (UAB BARCELONA -2009); Frank B. Cross, Thomas A. Smith & Antonio Tomarchio, *The Reagan Revolution in the Network of Law*, 57 Emory L. J. 1227 (2008); Thomas A. Smith, *The Web of the Law*, 44 San Diego L.R. 309 (2007); James Fowler, Timothy R. Johnson, James F. Spriggs II, Sangick Jeon & Paul J. Wahlbeck, *Network Analysis and the Law: Measuring the Legal Importance of Precedents at the U.S. Supreme Court*, 15 Pol. Analysis, 324 (2007); *How Long is the Coastline of the Law? Thoughts on the Fractal Nature of Legal Systems*, 29 J. Leg. Stud. 545 (2000). See also Frank B. Cross, Thomas A. Smith & Antonio Tomarchio, *Determinants of Cohesion in the Supreme Court's Network of Precedents*, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=924110.

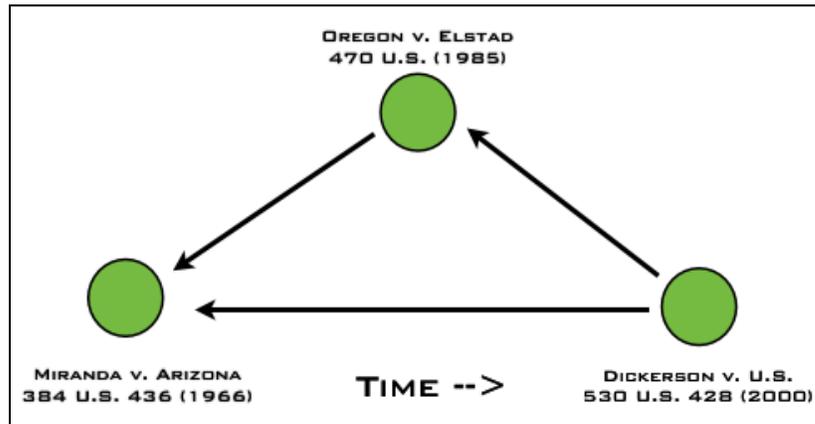
The properties of such graphs are a matter of active study in the physical science community.²⁷ As described in Bommarito, Katz & Zelner (2009a) “Citation networks are inherently *directed* graphs. The citing node asserts that a relationship exists with the cited node, never vice versa. Citation networks are the result of a generative process with identifiable constraints: arcs are only created when the tail node of the arc is created, and the head nodes must exist prior to the tail node.” Many traditional graph methods rely upon closed triangle or cycles. The strict head and tail ordering of a legal citation network yields a graph without cycle (i.e. an *acyclic* graph) as documents written at a given time cannot cite documents written in the future. Finally, citation networks are *dynamic* as the relative relationships between objects are updated as each additional document (and its citations) are added to the existing graph.

Citations generated by decisions in common law systems display these precise properties and the tools of network science, offer a rigorous and well-specific analytical apparatus useful for exploring the evolution of doctrine within common law systems. Consider the example offered in Figure 4.8 below. *Dickerson v. United States* both

²⁷ See e.g. Michael Bommarito, Daniel Katz, Jonathan Zelner & James Fowler, *Distance Measures for Dynamic Citation Networks* 389 *Physica A* 4201 (2010); Brian Karrer & Mark E. J. Newman, *Random Graph Models for Directed Acyclic Networks*, 80 *Phys. Rev. E* 046110 (2009); Brian Karrer & M. E. J. Newman, *Random Acyclic Networks*, 102 *Phys. Rev. Lett.* 128701 (2009); Michael Bommarito, Daniel Katz, Jonathan Zelner, *On the Stability of Community Detection Algorithms for Longitudinal Citation Data* in PROCEEDINGS OF THE 6TH CONFERENCE ON APPLICATIONS OF SOCIAL NETWORK ANALYSIS – ETH-ZURICH (2009); E. A. Leicht et al., *Large-Scale Structure of Time Evolving Citation Networks*, 59 *Eur. Physical. J. B* 75 (2007).

references *Oregon v. Elstad* and *Miranda v. Arizona*.²⁸ *Elstad* references *Miranda*, but not vice versa.

Figure 4.8: Legal Citations as a Dynamic Directed Acyclic Graph



Even this trivial example reveals an important feature present in most document citation networks. Whether the documents in question are academic articles, patents or judicial decisions or some other class of similar documents, *topical clustering* is a fundamental feature of virtually every document citation network. For example, in Figure 8 above, both *Elstad* and *Dickerson* are cases that help illuminate the contours of the *Miranda* doctrine. Thus, they are highly likely to cite other *Miranda* related cases and are rather unlikely to cite cases from otherwise topically unrelated domains. Taken to the extreme, this would imply an overall network with large disconnected components. Yet, most document citation networks also contain edges that span clusters and memorialize

²⁸ Obviously, *Dickerson v. United States* contains lots of additional references. The example above is designed to be exemplarily.

the cross-fertilizing links between particular topics. Taken together, this mixture of clustering and bridges yield a network that is actually rather well-connected.

Specifically, as highlighted in Bommarito, Katz & Zelner (2009b), the United States Supreme Court's citation network can reasonably be thought of as a *seamless web*.²⁹

Figures 4.9 – 4.11 below, highlight the rapid growth in the size and density of the United States Supreme Court citation network. In the formative period of interest in this study 1791-1835, the Court developed a cannon of relevant decisions on a variety of topics. Furthermore, using citations the early Court developed linkages between a wide range of substantive areas of law. Taken together, these linkages yield at network that by the end of the Marshall Court displayed meaningful structure.³⁰

²⁹ See Michael Bommarito, Daniel Katz & Jonathan Zelner, *Law as a Seamless Web? Comparing Various Network Representations of the United States Supreme Court Corpus (1791-2005)* in PROCEEDINGS OF THE 12TH INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND LAW (UAB BARCELONA -2009). The idea of law as a seamless web is long standing as can be traced back to the well known legal historian F.W. Maitland. See F.W. Maitland, *A Prologue to a History of English Law*, 14 L. Qtrly Rev. 13 (1898). See also Larry Solum, *Legal Theory Lexicon: The Law Is a Seamless Web* (January 18, 2009) available at <http://lsolum.typepad.com/legaltheory/2009/01/legal-theory--5.html>.

³⁰ For a dynamic visualization see Michael Bommarito, Daniel Katz, Jon Zelner & James Fowler, *The Development of Structure in the Citation Network of the United States Supreme Court — Now in HD!* available at <http://computationallegalstudies.com/2010/02/11/the-development-of-structure-in-the-citation-network-of-the-united-states-supreme-court-now-in-hd/>

Figure 4.9: United States Supreme Court Citation Network 1810

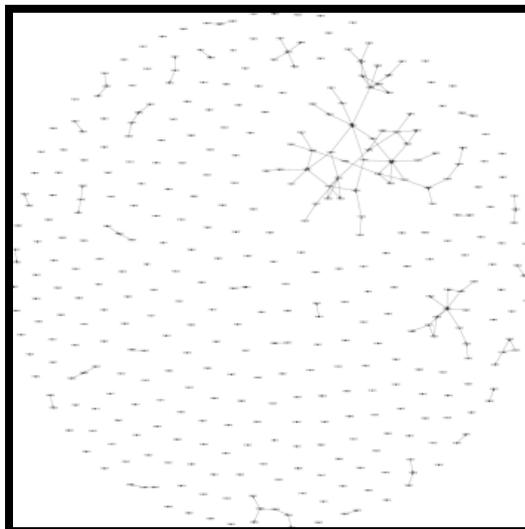


Figure 4.10: United States Supreme Court Citation Network 1820

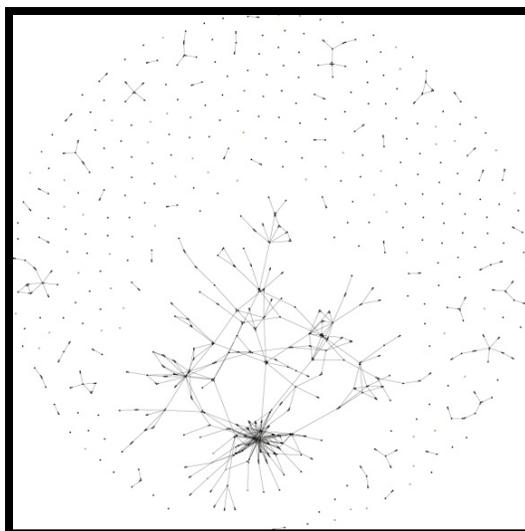
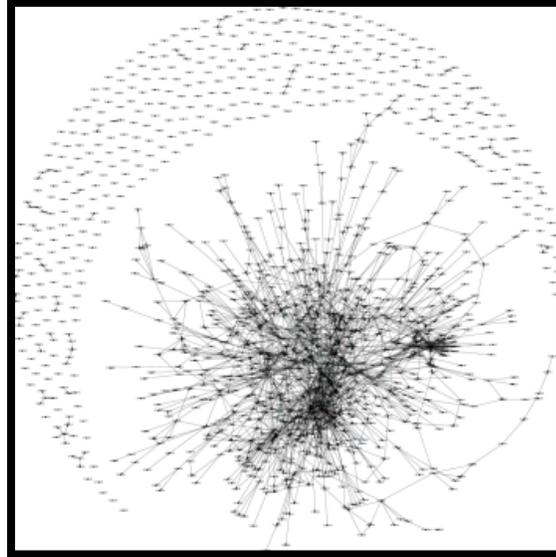


Figure 4.11: United States Supreme Court Citation Network 1835



THREE PERSPECTIVES ON THE STRUCTURAL IMPORTANCE OF FOREIGN LAW IN THE EARLY JURISPRUDENCE OF THE UNITED STATES SUPREME COURT

The summary statistical information regarding the citation patterns of the early Court demonstrates the significant number and fairly consistent presence of references to foreign legal material. However, this information alone neither reveals the importance of the cases that contain foreign law nor does it provide a complete picture of the role of foreign law in the development of the early court. With respect to these two propositions, network science offers several different approaches useful for considering the importance of particular nodes in an overall network. Stated more precisely, what is *structural importance* of the cases that contain references to foreign legal materials. Are these foreign law infused cases peripheral? Or are they core to the development of the

Supreme Court's jurisprudence? Applying three alternative approaches, this section demonstrates that foreign law infused cases are central to the early jurisprudence of the United States Supreme Court. Although a number of these early decisions are rarely cited today, in the formative years of the Court, these cases serve an important structural function. Namely, these are the decision that imported many doctrines from abroad thereby populating the American legal genome with foreign genetic material.

Network Visualization: An Ocular Test for Structural Importance

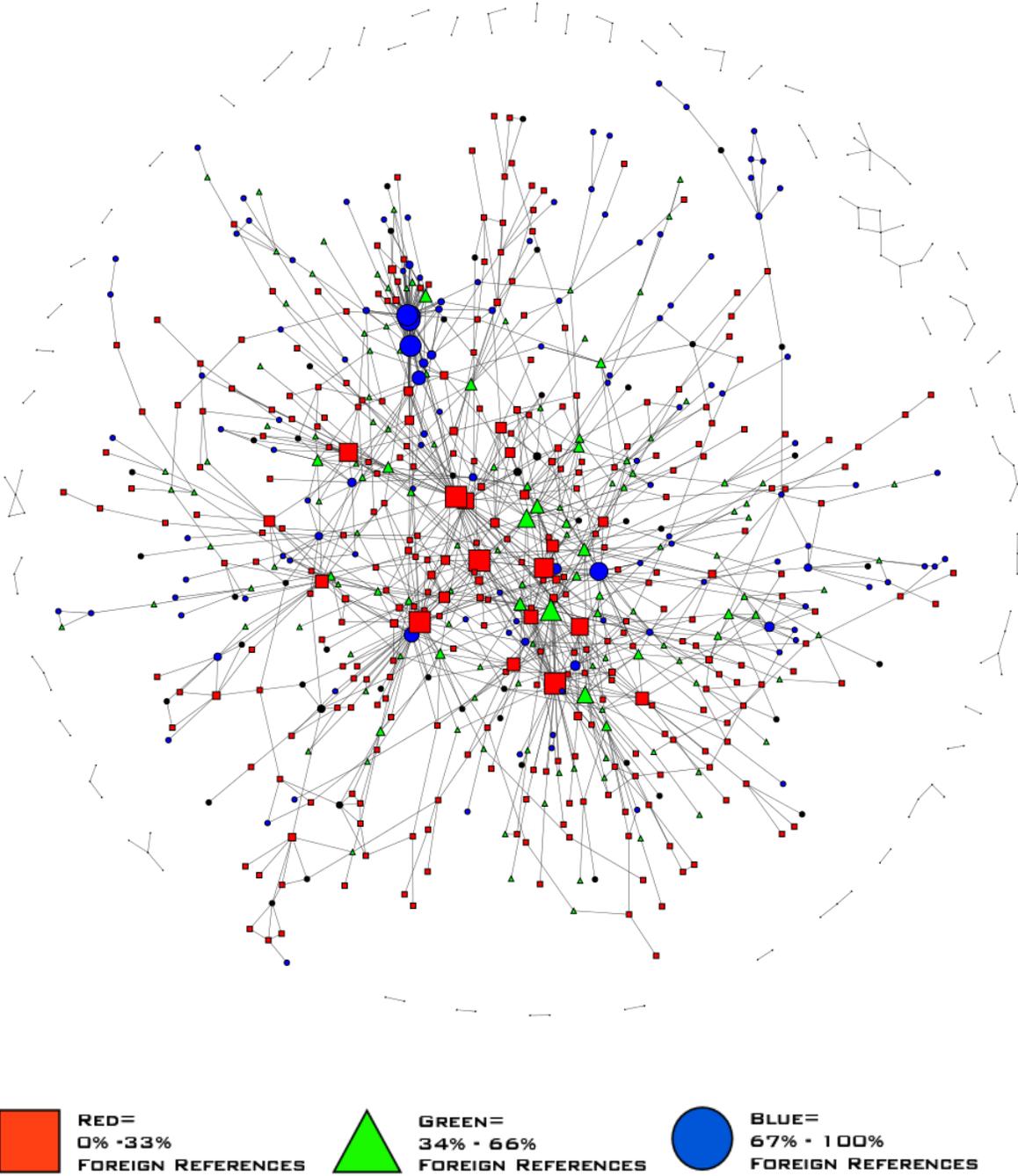
A simple approach to consider the structural importance of foreign law infused decision is through network visualization. While certainly not a definitive form of analysis, visualization allows for a quick first-order review of the patterns contained with a set of network data. While manually generating visualizations of a network of this size is a nearly impossible task, there exist a number of automated drawing procedures developed in computer and information science, that can be used to generate clear and transparent depictions of networks such the Supreme Court citation network. Such automated graph layout algorithms generate graphs with attractive properties such as minimized edge crossings, effective use of the planar area, inherent symmetry, and minimized differences in edge lengths.

We apply a spring spring-embedded, force-directed placement algorithm³¹ to visualize the case-to-case citation network of the United States Supreme Court as of 1835. As displayed in Figure 12 below, each case within the network is assigned to a category based upon the “foreignness” its citation material. More formally, let the foreignness of a case’s citations lie on a spectrum between 0% and 100%. We assign each case in the network a color and shape that corresponds to the “foreignness” of its embedded citations. Cases with relatively few {0% - 33%} references are assigned a red square node coloring, cases with moderate to majority {34% - 66%} of foreign references are assigned a green triangle node coloring and cases with a high number of foreign references {67% - 100%} are colored blue and assigned a circle.

In Figure 4.12, we applied our automated layout algorithm to visualize the Supreme Court Citation Network and cases are colorized as described above. In addition, each case is size by *indegree* - a raw count of the number of inbound references that are directed to a given decision. Thus, large and otherwise centrally located cases are those that might be characterized as structurally important.

³¹ For additional information on such graph algorithms *see e.g.* Ivan Herman, Graph Visualization and Navigation in Information Visualization: A Survey, 6 IEEE Transactions on Visualization and Computer Graphics 24, (2000); Peter Eades, *A Heuristic for Graph Drawing*, 42 Congressus Numerantium 149 (1984). *See also* Thomas M. J. Fruchterman & Edward M. Reingold, *Graph Drawing by Force-Directed Placement*, 21 Software Practice & Experience 1129 (1991); Tomishia Kamada & Satoru Kawai, *An Algorithm for Drawing General Undirected Graphs*, 31 Information Processing Letters 7 (1989).

Figure 4.12: United States Supreme Court Citation Network 1791-1835



With respect to an ocular analysis, it is useful to generate the equivalent of hypothesis test prior to reviewing the results of the visualization. If foreign law infused cases were not structurally important than we might expect a strong core of clustered red cases surrounding by two increasingly peripheral layers of green and blue cases where heavily foreign cases (i.e. blue cases) would generally occupy the extreme boundary of the network. A review of Figure 4.12 above does not follow any such pattern. Rather, a significant number of cases with a moderate to large proportion of references to foreign law occupy positions of relative structural importance while a large number of cases that largely rely upon domestic law occupying less significant positions. While not dispositive, this lends credence to our broader claims and justifies additional analysis.

Statistical Perspective on Structural Importance

Building upon the results initial results offered in *infra*, we sought a more formal analysis of the relationship between foreignness and structural importance. Specifically, we sought to evaluate the mapping between the network centrality of a given case and that cases' proportion of foreign references. Given the results in *infra*, we suspected that the centrality of a given case was either unrelated to its foreignness or that foreignness is perhaps even a weak predictor of centrality. We converted this into the following testable proposition:

H1: Higher the Proportion of Foreignness, the Lower the Centrality in the Network

To test the proposition, we calculated the *eigenvector centrality*³² for each node in the network. Eigenvector centrality is a commonly used measure of network centrality. As described in Perra & Fortunato (2008) with eigenvector centrality method “the prestige x_i of node i is just proportional to the sum of the prestiges of the neighboring nodes pointing to it:

$$\lambda x_i = \sum_{j:j \rightarrow i} x_j = \sum_j A_{ji} x_j = (\mathbf{A}^t \mathbf{x})_i. \quad (3)$$

From Eq. (3) we see that x_i is just the i -component of the eigenvector of the transpose of the adjacency matrix with eigenvalue λ .³³ Those with some familiarity with

³² For some useful example and explanations see e.g. Gabriele Lohmann, et. al., *Eigenvector Centrality Mapping for Analyzing Connectivity Patterns in fMRI Data of the Human Brain*, 5 PLoS ONE 5(4): e10232 (2010); De Wu Ding & Xiao Qing He, *Application of Eigenvector Centrality in Metabolic Networks* in PROCEEDINGS OF IEEE INTERNATIONAL CONFERENCE ON COMPUTER ENGINEERING AND TECHNOLOGY (2009); Nicola Perra & Santo Fortunato, *Spectral Centrality Measures in Complex Networks*, 78 Phys. Rev. E. 036107 (2008); Arzucan Özgür, Thuy Vu, Günes, Erkan & Dragomir R. Radev, *Identifying Gene-Disease Associations using Centrality on a Literature Mined Gene-Interaction Network*, 24 Bioinformatics 277 (2008); Phillip Bonacich, *Some Unique Properties of Eigenvector Centrality*, 29 Soc. Networks 555 (2007); Mark E.J. Newman, *The Structure and Function of Complex Networks*, 45 SIAM Rev. 167 (2003); David C. Bell, John S. Atkinson & Jerry W. Carlson, *Centrality Measures for Disease Transmission Networks*, 21 Soc. Networks 1 (1999) Phillip Bonacich, *Factoring and Weighting Approaches to Clique Identification*, 2 J. of Mathematical Soc. 113 (1972).

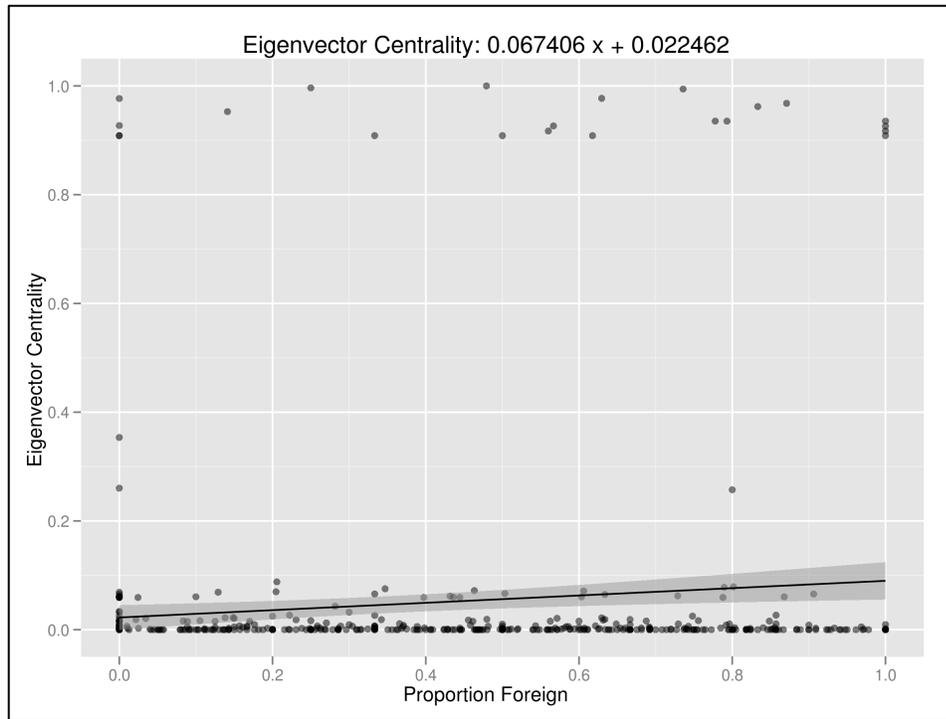
³³ “We notice that the trivial eigenvector with all components equal to zero is always a solution of Eq. (3). The true EV is then associated to the existence of non-trivial solutions of the eigenvalue problem of Eq. (3). From Eq. (3) we see that nodes with *indegree* = zero also have zero centrality: in general, nodes pointed at by nodes with zero centrality also have zero centrality and this effect will propagate to other nodes, so that in many cases EV would not give any information about a big number of nodes. To avoid this, it is useful to make the following modification: to each node we assign a prestige ϵ , which is independent of its relationships with the other nodes. Eq. (3) is then modified as follows: $x_i = \alpha (\mathbf{A}^t \mathbf{x})_i + \epsilon$.”

these approaches will observe the close relationship between the eigenvector method and related spectral methods such as to Google's PageRank Algorithm.

Given the construction of our hypothesis, in a deep sense, a no-result could be considered a result. A no-result or a positive coefficient would imply that the foreignness of case do not undermine its likelihood of being central in the network. Consistent with our expectations and in the opposite direction as our hypothesis, Figure 4.13 reveals that proportion foreign actually has a positive relationship upon centrality within the network. Indeed, the relationship is *highly significant* (**.01 level) and is thus more than sufficient to reject the notion that the foreignness of a case is a negative predictor of network centrality.³⁴

³⁴ A similar result was obtained when we ran several other measures of centrality such as *indegree*. The result is also robust to the inclusion of variables such as year of decision, etc. The simplest version is presented in *Figure 4.13* above.

Figure 4.13: Eigenvector Centrality and Proportion Foreignness



Node Removal, Robustness and Joint Structural Importance

There exist a number of well-specified and commonly used metrics to evaluate the structural importance of particular node in a broader network. While measures such as *eigenvector centrality* are commonly used throughout the literature, it is reasonable wonder whether a node level measure is entirely dispositive of the question considered within this paper. While we believe the analysis offered in Section V (b) is on point, to assuage any concerns, we apply an approach designed to capture the *joint* structural importance of set of nodes with a particular attribute or characteristic. In other words, we convert the analysis from *microscopic* resolution to *mesoscopic* resolution. In this vein,

the matter of joint structural importance is better informed by the literatures on community detection³⁵ and network robustness³⁶ than by the literature on network centrality.

Building from the basic principles outlined in these literatures, we consider the robustness of United States Supreme Court citation network to a particular form of targeted attack. As displayed in Figure 4.14 below, we start with network visualized in Figure 12 above and then engage in two stages of node removal. As displayed below, for Cut #1, we remove all Blue Circle nodes {67% - 100% foreign} and the regenerate the remaining network. In Cut # 2, we pursue a similar approach and remove the Green

³⁵ See e.g. Peter J. Mucha, et al., *Community Structure in Time-Dependent, Multiscale, and Multiplex Networks*, 328 *Science* 876-878 (2010); Mason A. Porter, Jukka-Pekka Onnela & Peter J. Mucha, *Communities in Networks*, 56 *Notices to the Amer. Mathematical Soc.* 1082 (2009); E. A. Leicht & Mark E. J. Newman, *Community Structure in Directed Networks*, 100 *Phys. Rev. Lett.* 118703 (2008); S. Fortunato & M. Barthélemy, *Resolution limit in community detection*, 104 *Proc. Natl. Acad. Sci. USA* 36 (2007); Mark E.J. Newman, *Finding Community Structure in Networks using the Eigenvectors of Matrices*, 74 *Phys. Rev. E* 036104 (2006); G. Palla, I. Derényi, I. Farkas & T. Vicsek, *Uncovering the Overlapping Community Structure of Complex Networks in Nature and Society*, 435 *Nature* 814 (2005); Mark E.J. Newman, *Detecting Community Structure in Networks*, 38 *Eur. Phys. J. B* 321 (2004); Michelle Girvan & Mark E.J. Newman, *Community Structure in Social and Biological Networks*, 99 *Proc. Natl. Acad. Sci. USA* 7821 (2002).

³⁶ See e.g. E. Estrada, *Network Robustness to Targeted Attacks: The Interplay of Expansibility and Degree Distribution*, 52 *Eur. Phys. J. B* 563 (2006); A. Beygelzimer, G. E. Grinstein, R. Linsker & I. Rish, *Improving Network Robustness by Edge Modification*, 357 *Physica A* 593 (2005); Duncan S. Callaway, Mark E. J. Newman, Steven H. Strogatz & Duncan J. Watts, *Network Robustness and Fragility: Percolation on Random Graphs*, 85 *Phys. Rev. Lett.* 5468 (2000); G. Paul, T. Tanizawa, S. Halvin & H. E. Stanley, *Optimization of Robustness of Complex Networks*, 38 *Eur. Phys. J. B* 187 (2000); Rika Albert, H. Jeong & Albert-László Barabási, *Attack and Error Tolerance of Complex Networks*, 406 *Nature* 378 (2000); R. Cohen, K. Erez, D. Ben-Avraham & S. Havlin, *Resilience of the Internet to Random Breakdowns*, 85 *Phys. Rev. Lett.* 4626 (2000).

Triangle nodes {34% - 66% foreign}. The residual network is then visualized in Figure 15 below.

Figure 4.14: SCOTUS 1835 After Targeted Removal Cut #1

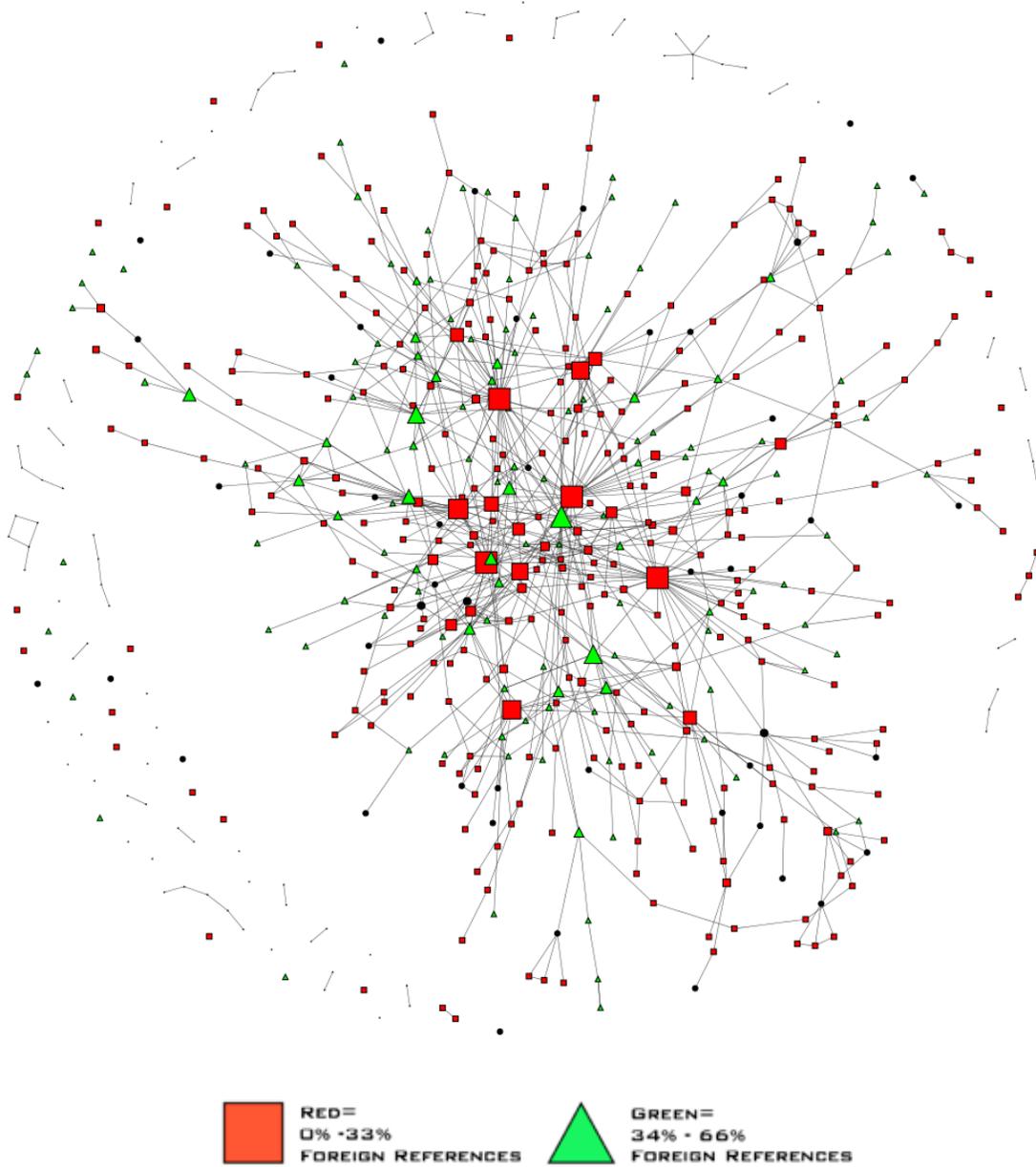


Figure 15: SCOTUS 1835 After Targeted Removal Cut #2

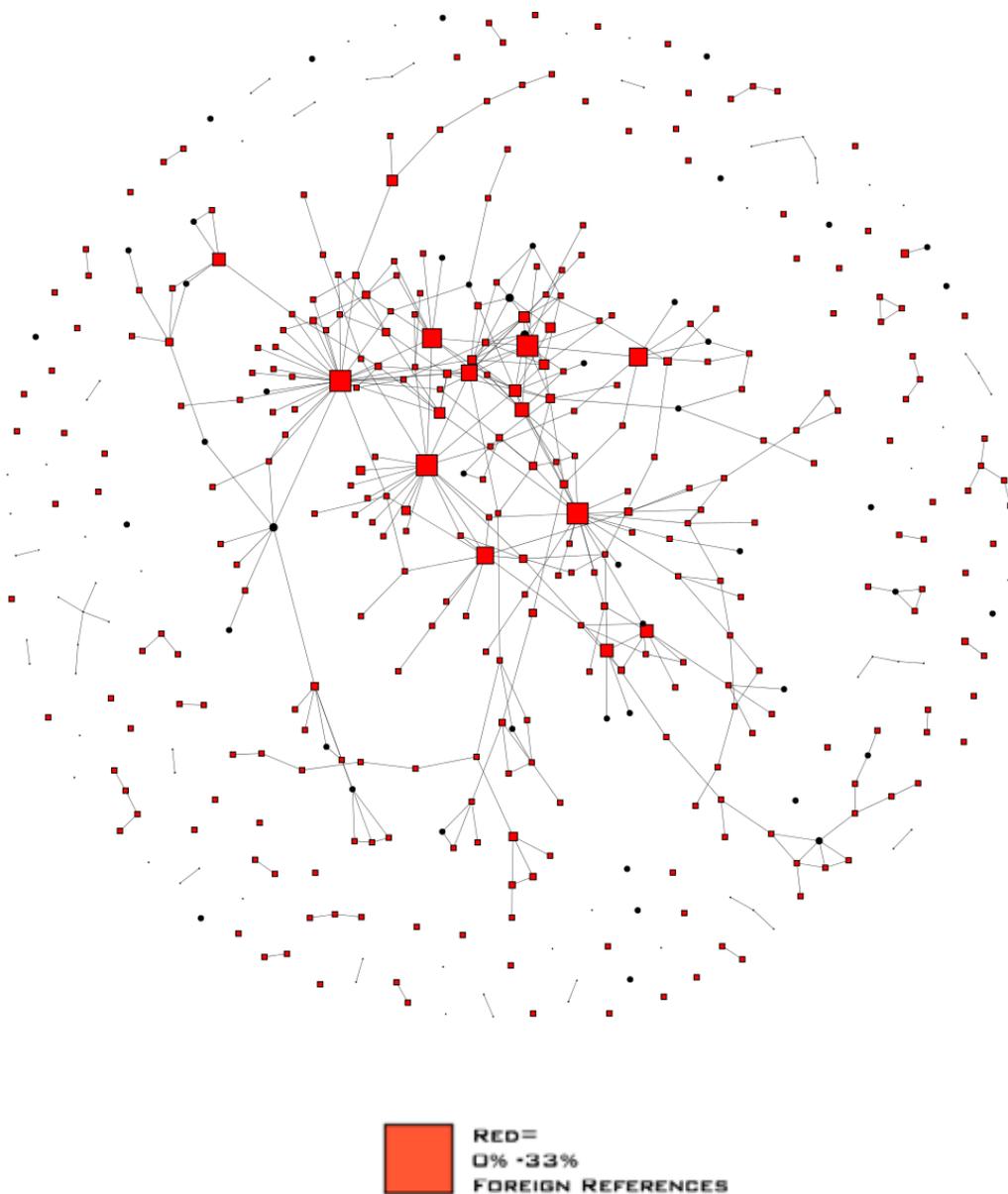


Table 3 displays the results from each stage of the targeted attack. The size of the largest weakly connected component is expressed with respect to vertices (nodes) $|V|$

and edges $|E|$. The targeted attack imposed significant consequences for the size of the network's largest weakly connected component and its edges. Indeed, there is significant decline in the number of vertices and most importantly a more than three fold decrease in the number of edges.

Table 4.3: Targeted Attack and Network Robustness

<i>Largest Weakly Connected Component</i>	$ V $	$ E $
<i>Original Network</i>	754	1260
<i>Residual Network: Cut #1</i>	585	816
<i>Residual Network: Cut #2</i>	426	404

While also not itself dispositive of the question, we believe this node removal strategy is a more rigorous method to consider the question of joint structural importance than the ocular approach offered in *infra* Section V(a). It represents an alternative to the approach presented in *infra* Section V(b). Taken together, we believe that the collective results offered through across three approaches point to a similar conclusion - foreign law is deeply woven into the fabric of the early American jurisprudence.

THE LEGAL GENOME PROJECT: A PERSPECTIVE ON THE 'EVOLUTION' OF THE COMMON LAW

Reviewing the early jurisprudence of the United States Supreme Court, one observes the blending of foreign legal sources and commentators with legal rules and principles of domestic origin. Across sets of cases and even within individual decisions,

the Court either relies exclusively on foreign law or in many instances draws support for its position by legal principles developed by foreign legal actors. This basic insight encourages one to more formally consider the dynamics present in the precedent based development of the Supreme Court's jurisprudence.

Thus, beyond its obvious appeal as a historical investigation, this project has much broader aims. While this paper does not fully resolve all of the difficult theoretical and empirical questions, it provides a perspective informative to both positive legal theory and the long-standing literature on common law 'evolution.'³⁷ Indeed, in order to develop a positive model of legal doctrine and thereby "take law seriously"³⁸ it is necessary to have a well-specified notion of the relevant doctrinal topology. To consider such questions requires a framework that can meet the methodological ante. I propose a "legal genome project" – an informatics based project designed to trace our legal origins and better understand the "evolution" of the common law.³⁹

Legal scholars have long described changes in the common in evolutionary terms. As noted in Hutchinson (2005) "In championing an evolutionary methodology, common lawyers trade off the established theories of biological development and benefit from its scientific pedigree. . . . Perhaps because of its own insecurities, jurisprudence jumped on

³⁷ See *infra* notes 39-42.

³⁸ See Barry Friedman, *Taking Law Seriously*, 4 *Persp. on. Pol.* 261 (2006)

³⁹ It is important to note the dynamics associated with a genome of ideas is not strictly equivalent to the human genome or strict evolution. The relevant question is whether the analytical apparatus can be meaningfully retrofitted to application within this intellectual domain. We believe the answer is yes.

the Darwinian bandwagon of the nineteenth century more quickly and more zealously than most other disciplines. Indeed, from the pioneering work of Maine, Holmes, Wigmore, and Corbin through to more recent technical efforts, the evolutionary motif has always loomed large over jurisprudential efforts to explicate the nature of the common law.⁴⁰ Indeed, the relevant literature commonly evaluates the outputs of the legal system and conceptualizes the underlying process as one of purification⁴¹ or move toward to selection of efficient rules.⁴² As noted in Katz, Stafford & Provins (2008) “the conditions necessary to conclude the Darwinian mechanism is the driver, is fairly strict. The common law may very well be working itself pure or moving toward trajectory but there is genuine tension between claims of trajectory and the reliance upon evolutionary mechanisms.⁴³ While a *legal genome project* implies the weak invocation of evolution

⁴⁰ See ALLAN C. HUTCHINSON, *EVOLUTION AND THE COMMON LAW* (2005).

⁴¹ As Professor Hutchinson notes, “[t]he leading so-called purist among the elite of modern jurisprudence is Ronald Dworkin. He has placed the notion that the law works itself pure at the dynamic core of his legal theory.” HUTCHINSON, *supra* note 14, at 70–71. It is not clear, however, that the law is working itself pure as the Darwinian program is about selection and adaptation—neither of which is necessarily related to the matters of morality or justice that occupy much of Dworkin’s project.

⁴² See Daniel Katz, Derek Stafford & Eric Provins, *Social Architecture, Judicial Peer Effects and the “Evolution” of the Law: Toward a Positive Theory of Judicial Social Structure*, 23 *Geo. State L. Rev.* 975 (2008) citing RICHARD POSNER, *ECONOMIC ANALYSIS OF THE LAW* (1973) (arguing that the common law tends toward efficiency in the aggregate because jurists maximize efficiency at the individual level). Subsequent scholars extend these claims. See Robert Cooter, Lewis Kornhauser, & David Lane, *Liability Rules, Limited Information, and the Role of Precedent*, 10 *BELL J. ECON.* 366 (1979); George Priest, *The Common Law Process and the Selection of Efficient Rules*, 6 *J. LEGAL STUD.* 65 (1977). For a recent attempt to reconcile this puzzle, see Nicola Gennaioli & Andrei Shleifer, *The Evolution of Common Law*, 115 *J. POL. ECON.* 43 (2007) (arguing that under a set of conditions legal evolution can be beneficial even if policy-motivated judges act in an interested fashion.). However, these scholars acknowledge they “have ignored several institutional features of appellate review that might affect our results.” *Id.* at 63. Namely, while these scholars identify panel effects as a source for moderation, their analysis might also engage other factors such as those considered herein.

⁴³ See Daniel Katz, Derek Stafford & Eric Provins, *Social Architecture, Judicial Peer Effects and the “Evolution” of the Law: Toward a Positive Theory of Judicial Social Structure*, 23 *Geo. State L. Rev.* 975

(i.e. small ‘e’), it offers greater promise than the prior discussions of common law evolution.

In addition to the evolution of the common law, the results offered herein contribute to the development of a positive model of law and legal reasoning. At its base, legal analysis is exercise in analogical reasoning. While historically a qualitative endeavor the sheer act of highlighting similarity and dissimilarity between various multidimensional objects is a task for which *artificial intelligence* has made significant strides. Among other reasons our interest in a “legal genome project” is motivated by the success of other related genome projects.⁴⁴ Starting at our origins, the foreign sources results in this paper represent an initial attempt to classify an important subset of material in the relative genome.⁴⁵ Moving forward, a legal genome project could help develop a “null model” for positive legal theorists and legal information engineers. It could be used to evaluate a variety of important dynamics including path dependence, recombination

(2008) noting “Again, Professor Hutchinson has articulated this point quite succinctly. ‘[N]ature and law are simply moving on largely in response to the demands and opportunities of their changing environmental situation. Neither always getting better (or worse) nor advancing in any particular direction, they are simply changing.’ See HUTCHINSON, *supra* note 14, at 238.

⁴⁴ Of direct relevance to this concept, is the so called “music genome project” which has been popularized by the online radio station Pandora. Pandora relies upon a vector of nearly 400 song attributes to “place” a song in multidimensional space. Next, a distance measure or distance function is applied. With the distance function and the raw attribute data in place it is possible to generate a similarity score between each object in the relevant universe. Of course, the initial selection of any distance function can be considered somewhat arbitrary. However, the basic distance project is really the initial organization of the information. Using an individual’s click-data and a machine learning algorithm, Pandora can tailor its recommendation to the specific preferences of particular individuals. For a citation based distance measure and a related set of possible functions see Michael Bommarito, Daniel Katz, Jonathan Zelner & James Fowler, *Distance Measures for Dynamic Citation Networks*, 389 *Physica A* 4201 (2010).

⁴⁵ In a sense, the legal genome project has already begun as both Lexis-Nexis and Westlaw have begun to provide their own version of recommender systems (from which click data can subsequently be obtained).

through analogical reasoning, fitness, selection and mutation through historical accident (or intentional reinterpretation).

CONCLUSION

Developing a new population level dataset of more than 35,000 references made the early United States Supreme Court, this paper systematically investigates the citation practices of the early United States Supreme Court 1791-1835. In this period, the Court transitioned from significant reliance on outside sources to systemically citing its own prior decisions. Although members of the Court could have *either* chosen to exclusively cite domestic legal sources *or* forgo references altogether, our analysis indicates that the Court combined multiple sources of authority and populated the American legal genome with a significant amount of foreign legal materials. Applying three separate approaches to consider the question, this analysis reveals that foreign law infused decisions populate both the core and periphery of the early citation network of the United States Supreme Court. Whether referencing decisions from the Courts of England, legal commentators such as Blackstone and Valin or decisions from other foreign jurists, the record indicates that when authoring some of the Court's original decisions on various substantive

questions, members of the Court jumpstarting American jurisprudence and did so with the substantial aid of foreign legal sources.⁴⁶

⁴⁶ For the all of the insight the paper provides, it also leave many questions unanswered. For example, to what extent does the American common law retain the foreign character that populated many of its earliest decisions? Is there a decay function for a second, third, fourth degree references? While foreign law is our law, future scholarship is needed to develop a measurement of the foreignness of the overall American legal genome.