Network Analysis and the Law: Measuring the Legal Importance of Supreme Court Precedents

James H. Fowler
UCSD

Timothy R. Johnson (Minn.)
James F. Spriggs II (WashU)
Sangick Jeon (Stanford)
Paul J. Wahlbeck (GWU)
The U.S. Supreme Court has “no influence over either the sword or the purse, no direction either of the strength or of the wealth of the society… neither Force nor Will, but merely judgment; and [it] must ultimately depend upon the aid of the executive arm for the efficacy of its judgments” (Hamilton 1788)
Early Court Had Little Power

- 18th and early 19th Century judiciary
  - openly political
  - had virtually no established norms and procedures (Allen 1964; Kempin 1959)

- Jay refuses nomination to Chief Justice in 1800
  - “I left the bench perfectly convinced that under a system so defective [the Court] would not…acquire the public confidence and respect which, as the last resort of justice in the nation, it should possess”
The Role of Precedent

■ Justices respond to weakness by strengthening *stare decisis* (Friedman 1985)
  ■ a legal norm inherited from English common law that encourages judges to follow *precedent* by letting the past decision stand

■ *Stare decisis* strengthens the Court
  ■ Basing rulings in “neutral legal principles” creates perception of “fair” decision-making (Tyler and Mitchell 1994)
  ■ Justices say they use precedent because Court is weak (Landes & Posner 1976, Ginsburg 2004; Powell 1990; Stevens 1983)
  ■ Source of Court’s power (Epstein & Knight 1998; Segal & Spaeth 2002)
The Quantitative Judicial Literature

- Has focused on ideology of decisions and judges (George and Epstein 1992; Segal 1985).

- “continues to present an underdeveloped theoretical and empirical understanding of why and when law changes” (Hansford and Spriggs 2006).

- What if we could quantify the strength of a precedent’s importance?
Questions We Might Answer

- How has the norm of *stare decisis* evolved over time?

- Does the Court consider the importance of a case when it decides whether or not to reverse it?

- Do reversed cases decline in importance once they are reversed?
Questions We Might Answer

- When the Court must reverse an *important* case, does it ground the reversing decision in *important* precedents?

- Which issues and cases does the Court prioritize?

- How do these priorities change over time?
Quantifying Precedent

- Each *judicial citation* is a latent judgment about the cases cited (and not cited)
  - When justices write opinions, they spend time researching the law and selecting precedents to support their arguments

- We can utilize the *quantity* and *quality* of judicial citations to measure the importance of a precedent
Past Attempts to Quantify Precedent

- Measurements of the prestige of judges
  (Kosma 1998; Landes, Lessig, and Solimine 1998)

- Citation behavior of appellate courts
  (Caldeira 1985; Harris 1985)

- Role of legal rules in specific issue domain
  (Landes and Posner 1976; McGuire 2001; Ulmer 1970)
Past Attempts to Quantify Precedent

- Large scale network analysis (Chandler 2005; Smith 2005)

- Legal vitality (Hansford and Spriggs 2006)

- None consider
  - quality of citations
  - dynamics of legal change
Some Network Terminology

- Each case can be thought of as a vertex or node

- An arc $i \rightarrow j = \text{case } i \text{ cites case } j \text{ in its majority opinion}$

- An arc from case $i$ to case $j$ represents
  - an outward citation for case $i$
  - an inward citation for case $j$

- Total arcs leading to and from each vertex is the degree
  - in degree $= \text{total inward citations}$
  - out degree $= \text{total outward citations}$
Network of Selected Landmark Abortion Decisions

Webster v. Reproductive Health Services
492 U.S. 490 (1989)

Akron v. Akron Center for Reproductive Health, Inc.
462 U.S. 416 (1983)

Planned Parenthood of Southeastern PA. v. Casey
505 U.S. 833 (1992)

Roe v. Wade
410 U.S. 113 (1973)

Thornburgh v. American College of Obstetricians and Gynecologists
476 U.S. 747 (1986)
Data Collection

- Generate List of Supreme Court “Decisions”

- Shepard’s citations to Supreme Court decisions from
  - Other Supreme Court decisions
  - Appellate courts
  - District courts
  - State courts
  - Law journals
  - Other secondary sources

- Majority, concurring, dissenting opinions
Data Collection

- Shepard’s data includes *types* of citations
  - String cite *or* treatment
  - Positive *or* negative

- Will (eventually) help distinguish between
  - Salience (string-cite network)
  - Authority (treatment network)
Types of Citations

- A cited case may be
  - an *important* ruling
  - *salient* to the citing case
  - a *reversed* opinion

- Regardless of content, each citation is a latent judgment about which cases are most important
  - an overruled case like *Plessy v. Ferguson* (1896) is probably more important than an overruled case like *Crain v. United States* (1896)

- Thus, we include all judicial citations in our analysis
Extended Network of Abortion Decisions
Mean Inward & Outward Citations by Year

![Chart showing the mean inward and outward citations by year. The x-axis represents the years from 1792 to 2002, and the y-axis represents the average number of inward or outward citations. The chart displays data points for each year, showing trends and fluctuations over time.]
Citations and *Stare Decisis*

- Prior to 19th century, both inward and outward citations rare
  - during this period there was no “firm doctrine of *stare decisis*” (Kempin 1959, 50)

- Outward citations slowly rise in the 19th century
  - norm takes hold
  - number of previous cases that could potentially be cited increases

- Inward citations also rise
  - justices begin writing more broadly applicable legal rules

- Inward citations fall in recent years
Citations and *Stare Decisis*

- Goodhart (1930) argues that by 1900, the doctrine of *stare decisis* was in full effect.
- Inward and outward citations continued to rise in the 20th century.
- To what extent does this rise signify a further strengthening of the norm?
- How many cases cite *at least* one other case?
Percentage of Cases with At Least One Outward Citation by Year

stare decisis in full effect

Warren Court
Stare Decisis and the Warren Court

- Warren Court (1953-1969) departs from *stare decisis*
  - Sharp decrease in outward citations
  - Sharp decrease in cases that do not cite any precedents

- Consistent with argument Warren Court was “activist”
  - Overruled more precedents than any other Court
    (Brenner and Spaeth 1995)
  - Revolutionized Constitutional law
    (Horwitz 1998; Powe 2000; Schwartz 1996)

- Warren Court also experiences sharp drop in *inward* citations
    cases contain highest *outward* citations in history
Possible Explanations

- Weak legal basis of Warren Court precedents
  - “Warren Court decisions did not articulate specific doctrinal analyses, and therefore did not provide firm guidance for future Courts” (Strossen 1996, 72).
  - Subsequent Courts would have trouble following Warren Court’s “many ambiguities, loopholes, and loosely formulated rules” (Emerson 1980, 440).

- Justices as policy oriented actors
  - More conservative Burger and Rehnquist Courts unable to justify policy choices with liberal Warren Court precedents
  - Forced to cite their own or pre-Warren precedents
Distribution of Inward and Outward Citations in the Precedent Network

- Inward Citations vs. Number of Cases
- Outward Citations vs. Number of Cases
Citations in High Energy Physics
Scientific and Judicial Citations

- Unifying property is the *degree distribution*
  - $P(k) = \text{probability paper has exactly } k \text{ citations}$

- Degree distributions exhibit *power-law tail*

- Common to many large scale networks
  (Albert and Barabasi 2001)

- Common to scientific citation networks
  (Redner 1998; Vazquez 2001)

- Suggests similar processes
  - Academics may be as strategic as judges!
Which Precedents Are Most Important?

- Expert opinions identify “landmark” cases in the Supreme Court’s history
  - Congressional Quarterly’s *Guide to the United States Supreme Court* (1997) – 2,500 cases

- Represents small fraction of 28,951 majority opinions that have been written by the Court

- Why rely on third parties when the citation network contains the evaluations of the justices *themselves*?
Precedents and Social Network Theory

- **Degree centrality** = number of inward citations (Proctor and Loomis 1951; Freeman 1979)
  - InfoSynthesis uses this to choose cases for its CD-ROM containing the 1000 “most important” cases decided by the Supreme Court

- However, treats all inward citations the same
  - Suppose case \( a \) is authoritative and case \( z \) is not
  - Suppose case \( a \rightarrow i \) and case \( z \rightarrow j \)
  - Implies \( i \) is more important than \( j \)
Eigenvector Centrality: An Improvement

- *Eigenvector centrality* estimates simultaneously the importance of all cases in a network (Bonacich 1972)

- Let $A$ be an $n \times n$ adjacency matrix representing all citations in a network such that $a_{ij} = 1$ if the $i$th case cites the $j$th case and 0 otherwise
  - Self-citation is not permitted, so main diagonal contains all zeros

<table>
<thead>
<tr>
<th></th>
<th>Roe</th>
<th>Akron</th>
<th>Thornburgh</th>
<th>Webster</th>
<th>Planned Parenthood</th>
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</table>


Eigenvector Centrality: An Improvement

- Let $x$ be a vector of importance measures so that each case’s importance is the sum of the importance of the cases that cite it:

$$x_i = a_{1i} x_1 + a_{2i} x_2 + \ldots + a_{ni} x_n \quad \text{or} \quad x = A^T x$$

- Probably no nonzero solution, so we assume proportionality instead of equality:

$$\lambda x_i = a_{1i} x_1 + a_{2i} x_2 + \ldots + a_{ni} x_n \quad \text{or} \quad \lambda x = A^T x$$

- Vector of importance scores $x$ can now be computed since it is an eigenvector of the eigenvalue $\lambda$
Problems with Eigenvector Centrality

- Technical
  - many court cases not cited so importance scores are 0
  - 0 score cases add nothing to importance of cases they cite
  - citation is \textit{time dependent}, so measure inherently biases downward importance of recent cases

- Substantive
  - assumes only inward citations contain information about importance
  - some cases cite only important precedents while others cast the net wider, relying on less important decisions
Well-Grounded Cases

- How well-grounded a case is in past precedent contains information about the cases it cites
  - Suppose case $h$ is well-grounded in authoritative precedents and case $z$ is not
  - Suppose case $h \rightarrow i$ and case $z \rightarrow j$
  - Implies $i$ is more authoritative than $j$
Inward and Outward Importance

- Recent improvements in internet search engines (Kleinberg 1998) have generated an alternative method.

- A **outward important** case cites many important decisions
  - Helps define *which* decisions are important

- An **inward important** case is cited by many well-grounded decisions
  - Helps define *which* cases are well-grounded in past precedent

- Two-way relation
  - well-grounded cases cite influential decisions and influential cases are cited by decisions that are well-grounded
Importance in Selected Landmark Abortion Decisions Network

OUTWARD

Webster v. Reproductive Health Services
492 U.S. 490 (1989)

Planned Parenthood of Southeastern PA v. Casey
505 U.S. 833 (1992)

INWARD

Akron v. Akron Center for Reproductive Health, Inc.
462 U.S. 416 (1983)

Roe v. Wade
410 U.S. 113 (1973)

Thornburgh v. American College of Obstetricians and Gynecologists
476 U.S. 747 (1986)
Importance Scores

- Let $x$ be a vector of authority scores and $y$ a vector of hub scores.
  - each case’s inward importance score is proportional to the sum of the outward importance scores of the cases that cite it:
    $$\lambda_x x_i = a_{1i} y_1 + a_{2i} y_2 + \ldots + a_{ni} y_n \quad \text{or} \quad x = A^T y$$
  - each case’s outward importance score is proportional to the sum of the outward importance scores of the cases that it cites:
    $$\lambda_y y_i = a_{i1} x_1 + a_{i2} x_2 + \ldots + a_{in} x_n \quad \text{or} \quad y = Ax$$

- Equations imply $\lambda_x x = A^T Ax$ and $\lambda_y y = AA^T y$

- Importance scores computed using eigenvectors of principal eigenvalues $\lambda_x$ and $\lambda_y$
## Importance Ranks of Selected Landmark Abortion Decisions

<table>
<thead>
<tr>
<th>Decision</th>
<th>5 Case Network</th>
<th>72 Case Network</th>
<th>Complete Network</th>
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<tr>
<td></td>
<td>Inward % Rank</td>
<td>Outward % Rank</td>
<td>Inward Citations</td>
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<tr>
<td><strong>Roe v. Wade,</strong> 410 U.S. 113 (1973)</td>
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<td><strong>Akron v. Akron Center for Reproductive Health,</strong> 462 U.S. 416 (1983)</td>
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<td><strong>Thornburgh v. American College,</strong> 476 U.S. 747 (1986)</td>
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<td>0.60</td>
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<td><strong>Webster v. Reproductive Health Services,</strong> 492 U.S. 490 (1989)</td>
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<td>0.80</td>
<td>1</td>
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<tr>
<td><strong>Planned Parenthood of Southeastern Pennsylvania v. Casey,</strong> 505 U.S. 833 (1992)</td>
<td>0.20</td>
<td>1.00</td>
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</tr>
</tbody>
</table>
Checking the Results

- *Akron* has fewer outward citations than *Webster*, but higher outward importance
  - Means *Akron* cites cases that are more important

- Portion of cited cases considered important by *Oxford Guide* or *CQ*
  - 82% (23/28) of *Akron’s*
  - 67% (35/52) of *Webster’s*
## Top 20 Inward Important Cases in 2005

<table>
<thead>
<tr>
<th>Case</th>
<th>Inward Importance Score (Percentile Rank)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cantwell v. Connecticut (1940)</td>
<td>0.1983 (1.000000)</td>
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<tr>
<td>Schneider v. State (Town of Irvington) (1930)</td>
<td>0.1648 (.9999654)</td>
</tr>
<tr>
<td>New York Times v. Sullivan (1964)</td>
<td>0.1567 (.9999309)</td>
</tr>
<tr>
<td>Thornhill v. Alabama (1940)</td>
<td>0.1475 (.9998963)</td>
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<tr>
<td>NAACP v. Button (1963)</td>
<td>0.1473 (.9998618)</td>
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<tr>
<td>NAACP v. Alabama</td>
<td>0.1415 (.9998273)</td>
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<tr>
<td>Lovell v. City of Griffin (1938)</td>
<td>0.1348 (.9997928)</td>
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<tr>
<td>Chaplinsky v. New Hampshire (1942)</td>
<td>0.1158 (.9997582)</td>
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<td>McCulloch v. Maryland (1819)</td>
<td>0.1130 (.9997237)</td>
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<tr>
<td>Shelton v. Tucker (1960)</td>
<td>0.1064 (.9996891)</td>
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<tr>
<td>Stromberg v. California (1931)</td>
<td>0.1047 (.9996546)</td>
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<tr>
<td>Roth v. U.S. (1957)</td>
<td>0.1046 (.9996200)</td>
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<tr>
<td>Near v. Minnesota (1931)</td>
<td>0.1038 (.9995855)</td>
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<tr>
<td>Speiser v. Randall (1958)</td>
<td>0.1030 (.9995509)</td>
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<tr>
<td>Thomas v. Collins (1945)</td>
<td>0.1022 (.9995164)</td>
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<td>Hague v. Committee for Industrial Org. (1951)</td>
<td>0.1015 (.9994819)</td>
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<td>Buckley v. Valeo (1976)</td>
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<td>Pierce v. Society of Sisters (1925)</td>
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<td>DeJonge v. Oregon (1937)</td>
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<td>Whitney v. California (1927)</td>
<td>0.0892 (.9993437)</td>
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</table>
## Top 20 Outward Important Cases in 2005

<table>
<thead>
<tr>
<th>Case</th>
<th>Outward Importance Score (Percentile Rank)</th>
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<tbody>
<tr>
<td>First National Bank v. Bellotti (1978)</td>
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<td>Griswold v. Connecticut (1965)</td>
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<td>Buckley v. Valeo (1976)</td>
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<td>Dennis v. U.S. (1951)</td>
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<td>Young v. American Mini Theatres Inc. (1976)</td>
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<td>Grayned v. City of Rockford (1972)</td>
<td>0.1007 (.9998273)</td>
</tr>
<tr>
<td>Kovacs v. Cooper (1949)</td>
<td>0.0899 (.9997928)</td>
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<td>Gibson v. FL Legislative Investigation Committee (1963)</td>
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<td>Communist Party of U.S. v. Subversive Activities Control Board (1961)</td>
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<td>Members of City Council of L.A. v. Taxpayers for Vincent (1984)</td>
<td>0.0920 (.9996891)</td>
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<tr>
<td>VA State Board of Pharmacy v. VA Citizens Consumer Council (1976)</td>
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<td>Roe v. Wade (1973)</td>
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<td>American Communications Assn. v. Douds (1950)</td>
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<td>Richmond Newspapers Inc. v. VA (1980)</td>
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<td>Consol. Edison Co. of NY v. Public Service Commission of NY (1980)</td>
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<td>New York v. Ferber (1982)</td>
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<td>New York Times. V. Sullivan (1964)</td>
<td>0.0796 (.9993783)</td>
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<tr>
<td>R.A.V. v. City of St. Paul (1992)</td>
<td>0.0786 (.9993437)</td>
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</table>
Speiser v. Randall (1958)

- Considered by ACLU one of the 100 most important Supreme Court decisions
- Excluded from 1979 first edition of Congressional Quarterly’s Guide to the U.S. Supreme Court
- Partitioning network to 1979 puts Speiser in top 20
- It has taken judicial specialists 18 years with the publication of the 1997 third edition of the Guide, to recognize the significance of Speiser
Validity

- How well do importance measures measure importance?
  - Important cases should be cited more often than other cases
- Regress count of citations to each case by year on importance measures (negative binomial)
- Include lagged dependent variable, age variables, and adjust for clustering
## Relationship Between Importance Measures and Future Citations of U.S. Supreme Court Precedent by the U.S. Supreme Court, 1792-2005

**Dependent Variable:** Number of Times a U.S. Supreme Court Case is Cited by the U.S. Supreme Court in the Following Year

<table>
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<th>Importance Measure</th>
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<th>Inward Eigenvector Centrality</th>
<th>Outward Eigenvector Centrality</th>
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<td>-0.007 (0.001)</td>
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### Relationship Between Importance Measures and Future Citations of U.S. Supreme Court Precedent by U.S. Courts of Appeals, 1792-2005

**Dependent Variable:** Number of Times a U.S. Supreme Court Case is Cited by the U.S. Court of Appeals in the Following Year

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<th>Importance Measure</th>
<th>Inward Importance</th>
<th>Outward Importance</th>
<th>Inward Cites</th>
<th>Outward Cites</th>
<th>Inward Eigenvector Centrality</th>
<th>Outward Eigenvector Centrality</th>
<th>New York Times</th>
<th>Amici Briefs</th>
<th>CQ List</th>
<th>Oxford List</th>
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</thead>
<tbody>
<tr>
<td>Importance Measure</td>
<td>2.14 (0.03)</td>
<td>1.85 (0.03)</td>
<td>0.064 (0.001)</td>
<td>0.046 (0.001)</td>
<td>1.12 (0.03)</td>
<td>2.25 (0.04)</td>
<td>0.27 (0.02)</td>
<td>0.06 (0.01)</td>
<td>1.04 (0.03)</td>
<td>1.29 (0.05)</td>
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<tr>
<td>Lagged Dep. Variable</td>
<td>0.28 (0.01)</td>
<td>0.30 (0.01)</td>
<td>0.26 (0.01)</td>
<td>0.29 (0.01)</td>
<td>0.37 (0.01)</td>
<td>0.29 (0.01)</td>
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<td>0.10 (0.00)</td>
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<td>Ln(Age)</td>
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<td>-0.14 (0.01)</td>
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<td>-0.05 (0.01)</td>
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<td>Age</td>
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<td>Constant</td>
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<td>Dispersion</td>
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<td>Log Pseudo-Likelihood Null Likelihood</td>
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</table>
### Relationship Between Importance Measures and Future Citations of U.S. Supreme Court Precedent by State Courts, 1792-2005

**Dependent Variable:** Number of Times a U.S. Supreme Court Case is Cited by State Courts in the Following Year

<table>
<thead>
<tr>
<th>Importance Measure</th>
<th>Inward Importance</th>
<th>Outward Importance</th>
<th>Inward Cites</th>
<th>Outward Cites</th>
<th>Inward Eigenvector Centrality</th>
<th>Outward Eigenvector Centrality</th>
<th>New York Times</th>
<th>Amici Briefs</th>
<th>CQ List</th>
<th>Oxford List</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance Measure</td>
<td>2.54 (0.03)</td>
<td>1.98 (0.05)</td>
<td>0.065 (0.001)</td>
<td>0.039 (0.001)</td>
<td>1.80 (0.03)</td>
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<tr>
<td>Ln(Age)</td>
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<td>-0.03 (0.01)</td>
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</table>
Comparison of Alternative Importance Measures for Predicting Future Citations to U.S. Supreme Court Precedent by the U.S. Supreme Court, 1792-2005

<table>
<thead>
<tr>
<th>Alternative Importance Measure</th>
<th>Effect Size: Percent Increase in Probability a U.S. Supreme Court Case is Cited by the U.S. Supreme Court in the Following Year Given a One Standard Deviation Change in the Importance Measure</th>
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</thead>
<tbody>
<tr>
<td>Inward Importance</td>
<td>73.8 (0.8)</td>
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<tr>
<td>Outward Importance</td>
<td>35.7 (0.9)</td>
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<tr>
<td>Alternative Importance Measure</td>
<td>33.1 (0.8)</td>
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Comparison of Alternative Importance Measures for Predicting Future Citations to U.S. Supreme Court Precedent by U.S. Appeals Courts, 1792-2005

<table>
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<th>Alternative Importance Measure:</th>
<th>Effect Size: Percent Increase in Probability a U.S. Supreme Court Case is Cited by the U.S. Courts of Appeals in the Following Year Given a One Standard Deviation Change in the Importance Measure</th>
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<tbody>
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<tr>
<td>Outward Importance</td>
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<td></td>
<td>(1.0)</td>
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<td>Alternative Importance Measure</td>
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<td>Log Likelihood Ratio</td>
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<tr>
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## Comparison of Alternative Importance Measures for Predicting Future Citations to U.S. Supreme Court Precedent by the U.S. Supreme Court, 1792-2005

Effect Size: Percent Increase in Probability a U.S. Supreme Court Case is Cited by the State Courts in the Following Year Given a One Standard Deviation Change in the Importance Measure

<table>
<thead>
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<td>(1.5)</td>
<td>(1.2)</td>
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<td>(1.1)</td>
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<td>(1.3)</td>
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<td>198884</td>
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<td>2483569</td>
</tr>
</tbody>
</table>
The Dynamics of a Precedent’s Importance

- Expert evaluations give us a static picture of the present

- Importance scores can give us a dynamic picture
  - Partition the network by terminal year (1792-1800, 1792-1801, etc.)
  - Find importance scores for each partition

- Permits observation of how importance of each decision changes through time
Rise of *Brown* and *Roe*
Rise of *Brown* and *Roe*
Rise of *Brown* and *Roe*

  - “the judiciary itself was ambivalent about the [*Brown*] policy… the original *Brown* opinion [revealed] little judicial commitment to a philosophy of racial equality” (Johnson and Cannon 1984)
  - barely more than 1% of schools desegregated by 1964

- *Roe* was immediately effective, voiding laws in every state that prohibited or limited abortion (Segal and Spaeth 1996)
  - 181,140 abortions in the first three months after *Roe*—more than 8 times the number in all of 1969 (Rosenberg 1991; Bond and Johnson 1982)
Changes in Court Priorities

- Once important decisions decline substantially from their peaks as legal rules settle beyond controversy
  - *Bank of Augusta v. Earle* (1839), *Gibbons v. Ogden* (1824), and *Minnesota Rate Cases* (1913)

- Changes in importance reflect (in part) changes in types of issues Court chooses to address
  - “[F]or the first 150 years of its history, the Supreme Court exerted its greatest influence on the states of the Union through its decisions on matters of economic interest. In case after case—as the justices construed the contract clause, the commerce clause, and defined the state’s power of taxation—the Court determined the relationship of state to federal power” (Biskupic and Witt 1997)
The Rise and Fall of Importance

- **Gibbons v. Ogden**, 22 U.S. 1 (1824)
- **Bank of Augusta v. Earle**, 38 U.S. 519 (1839)
- **Minnesota Rate Cases**, 230 U.S. 352 (1913)
Changing Importance of Commerce and Civil Rights Issues

---

**Years**


**Authority Score**

0.05 0.10 0.15 0.20

---

**Minnesota Rate Cases, 230 U.S. 352 (1913)**

**Gibbons v. Ogden, 22 U.S. 1 (1824)**

**McCulloch v. Maryland, 17 U.S. 316 (1819)**

**Cantwell v. Connecticut, 310 U.S. 296 (1940)**

**Thornhill v. Alabama, 310 U.S. 88 (1940)**
Future Work

- Ideology
  - Martin-Quinn scores
  - Extend vote records to 19th Century

- Other covariates
Future Work – Puzzles

- When (and why) does precedent constrain judicial decision-making?
  - Decision to grant cert
  - Individual voting behavior
  - Individual authorship behavior

- Who constrains whom? The appellate courts or the Supreme Court?

- Do law journals influence case authority?
Conclusion

- We construct the complete network of 28,951 majority opinions written by the U.S. Supreme Court and the cases they cite from 1792 to 2005.

- Data demonstrates quantitatively:
  - the evolution of the norm of *stare decisis* in the 19th Century
  - Significant deviation from this norm by the activist Warren court.
Conclusion

- We describe a method for creating *importance scores* using network data to identify the most important Court precedents.

- This method yields rankings that:
  - Perform better than simple citation counts
  - Predict evaluations by legal experts
  - Predict which cases will be cited by courts at all levels
Network Analysis and the Law: Measuring the Legal Importance of Supreme Court Precedents

James H. Fowler
UCD → UCSD

Timothy R. Johnson (Minn.)
James F. Spriggs II (UCD → WashU)
Sangick Jeon (UCD → Stanford)
Paul J. Wahlbeck (GWU)