Ideological Alliances on the United States Supreme Court: Visualizing 50 Years of Co-Voting Data

2006 SLIS Doctoral Student Research Forum

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Research Frame

1. **Question**: How can network graphing and information visualization techniques improve the understanding of the work of the United States Supreme Court?

2. **Context**: Visualizations used for instruction. (Pedagogy)

3. **Learning Objective**: Students will understand the voting associations of the Justices of the Supreme Court and the ideological alliances and divides suggested by these associations.

4. **Domain**: Political Science, Law, Everyone interested in understanding one third of the Federal government.

5. **Methodology**: Harvesting and manipulating existing data using multidimensional scaling (MDS) and spring force algorithms as contained in the two programs, R and Pajek.

6. **Underlying Premise**: Distance-Similarity Metaphor (Items closer together are more similar than items further apart.)
Mania for Co-Voting Data

July 2, 2005 New York Times

Agreement Among Supreme Court Justices

Percentage of times that justices agreed in work performed as part of 1200 cases.

Justice Sandra Day O’Connor was near the center of the court and was a swing vote on important and a host of other cases.

Justices Antonin Scalia and John Paul Stevens were the least likely to be on the same side of a case, agreeing in only 14 percent of cases. Justice Stewart and Justice Thomas had the highest agreement rate at 79 percent.


1951 Visualizations
(Thurston & Degan)

- Factorial / Vector Analysis of Co-Voting
- 1943 & 1944 Terms
- 9 Vectors (one for each Justice) in 3 dimensions

1985 Diagrams

Warren Court (1953 – 1969)

Burger Court (1969 – 1986)


2005 Visualizations


CA of Dissent table. Shows Stevens is fond of being lone dissenter. Scalia & Thomas are often a group of 2 or 3. When Breyer and Souter dissent, it is in a pack of 4.

Jeffrey C. Johnson Stephen P. Borgatti
My Approach

Harvard Law Review
Annual Review of the Supreme Court Term
Co-Voting Statistics: 1956–present

1974 Term →

**TABLE 1 (continued)**

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*This table records the number of times that one justice voted with another. Two justices are considered to have voted together whenever they joined in the same opinion.*
Spreadsheet Capture Process

30 Worksheets Aggregated on Excel
Stochastic As to Overall Layout

But individual relationships become more deterministic and fixed.

AND, can visualize an incomplete Matrix

Justices of the United States Supreme Court (1956 – 1985 Terms)

Overlay of Justice Icons
Iconographic Lineups

NY Times Representational Device:
• Justices listed in linear fashion along a political spectrum (progressive to conservative)
• Justices in losing voting block are grayed-out.

Warren Court 1 (Oct. 5, 1953 – March 27, 1955 1.47 years)
• Chief Justice Fred M. Vinson
died Sept. 8, 1953
• Chief Justice Earl Warren
  (Eisenhower appointee) oath Oct. 5, 1953

Warren Court 2 (March 28, 1955 – Oct. 15, 1956 0.44 years)
• Robert H. Jackson
died Oct. 9, 1954
• John Marshall Harlan II
  (Eisenhower appointee) oath March 28, 1955

Warren Court 3 (Oct. 16, 1956 to March 24, 1957 0.44 years)
• Sherman Minton
  retired Oct. 15, 1956
• William J. Brennan, Jr.
  (Eisenhower appointee) oath Oct. 16, 1956

Warren Court 4 (March 25, 1957 to Oct. 13, 1958 1.55 years)
• Stanley F. Reed
  retired Feb. 25, 1967
• Charles E. Whittaker
  (Eisenhower appointee) oath March 25, 1957
Warren Court 5 (Oct. 14, 1958 to April 15, 1962 3.50 years)
- Harold Burton
- Potter Stewart
- Charles E. Whittaker
- Byron R. White
- Potter Stewart (Eisenhower appointee) oath Oct. 14, 1958
- Charles E. Whittaker retired March 31, 1962
- Byron R. White (Kennedy appointee) oath April 16, 1962

Warren Court 6 (April 16, 1962 to Sept. 30, 1962 0.46 years)
- Harold Burton
- Potter Stewart
- Charles E. Whittaker
- Byron R. White
- Potter Stewart (Eisenhower appointee) oath Oct. 14, 1958
- Charles E. Whittaker retired March 31, 1962
- Byron R. White (Kennedy appointee) oath April 16, 1962

Warren Court 7 (Oct. 1, 1962 to Oct. 3, 1965 3.01 years)
- Harold Burton
- Potter Stewart
- Charles E. Whittaker
- Byron R. White
- Harold Burton retired Aug. 28, 1962
- Potter Stewart (Eisenhower appointee) oath Oct. 1, 1962
- Charles E. Whittaker retired March 31, 1962
- Byron R. White (Kennedy appointee) oath April 16, 1962

Warren Court 8 (Oct. 4, 1965 to Oct. 1, 1967 1.99 years)
- Harold Burton
- Potter Stewart
- Charles E. Whittaker
- Byron R. White
- Harold Burton retired July 25, 1965
- Potter Stewart (Eisenhower appointee) oath Oct. 1, 1962
- Charles E. Whittaker retired March 31, 1962
- Byron R. White (Kennedy appointee) oath April 16, 1962

Burger Court 1 (June 23, 1969 to June 8, 1970 6.36 years)
- Chief Justice Earl Warren
- Chief Justice Warren E. Burger
- Harry Andrew Blackmun
- Hugo L. Black
- John Marshall Harlan II
- Thurgood Marshall
- Lewis Franklin Powell Jr.
- William Hubbs Rehnquist
- Chief Justice Earl Warren retired June 23, 1969
- Chief Justice Warren E. Burger (Nixon appointee) oath June 23, 1969
- Harry Andrew Blackmun (Nixon appointee) oath June 9, 1970
- Hugo L. Black (Nixon appointee) oath Sept. 17, 1971
- John Marshall Harlan II (Nixon appointee) oath Sept. 23, 1971
- Lewis Franklin Powell Jr. (Nixon appointee) oath Jan. 7, 1972
- William Hubbs Rehnquist (Nixon appointee) oath Jan. 7, 1972

Warren Court 9 (Oct. 2, 1967 to June 22, 1969 1.72 years)
- Harold Burton
- Potter Stewart
- Charles E. Whittaker
- Byron R. White
- Harold Burton retired June 12, 1967
- Potter Stewart (Eisenhower appointee) oath Oct. 2, 1967
- Charles E. Whittaker retired Sept. 17, 1971
- Byron R. White (Kennedy appointee) oath Apr. 16, 1962

Burger Court 2 (June 9, 1970 to Jan. 6, 1972 2.58 years)
- Chief Justice Earl Warren
- Chief Justice Warren E. Burger
- Harry Andrew Blackmun
- Hugo L. Black
- John Marshall Harlan II
- Thurgood Marshall
- Lewis Franklin Powell Jr.
- William Hubbs Rehnquist
- Chief Justice Earl Warren retired June 23, 1969
- Chief Justice Warren E. Burger (Nixon appointee) oath June 23, 1969
- Harry Andrew Blackmun (Nixon appointee) oath June 9, 1970
- Hugo L. Black (Nixon appointee) oath Sept. 17, 1971
- John Marshall Harlan II (Nixon appointee) oath Sept. 23, 1971
- Thurgood Marshall (Nixon appointee) oath April 18, 1971
- Lewis Franklin Powell Jr. (Nixon appointee) oath Jan. 7, 1972
- William Hubbs Rehnquist (Nixon appointee) oath Jan. 7, 1972

Burger Court 3 (Jan. 7, 1972 to Dec. 18, 1976 3.95 years)
- Chief Justice Earl Warren
- Chief Justice Warren E. Burger
- Harry Andrew Blackmun
- Hugo L. Black
- John Marshall Harlan II
- Thurgood Marshall
- Lewis Franklin Powell Jr.
- William Hubbs Rehnquist
- Chief Justice Earl Warren retired June 23, 1969
- Chief Justice Warren E. Burger (Nixon appointee) oath June 23, 1969
- Harry Andrew Blackmun (Nixon appointee) oath June 9, 1970
- Hugo L. Black (Nixon appointee) oath Sept. 17, 1971
- John Marshall Harlan II (Nixon appointee) oath Sept. 23, 1971
- Thurgood Marshall (Nixon appointee) oath April 18, 1971
- Lewis Franklin Powell Jr. (Nixon appointee) oath Jan. 7, 1972
- William Hubbs Rehnquist (Nixon appointee) oath Jan. 7, 1972
Roberts Court 1 (Sept. 29, 2005 to Jan. 30, 2006 0.34 years)
- Chief Justice William H. Rehnquist
died Sept. 3, 2005
- Chief Justice John G. Roberts, Jr.
(G.W. Bush appointee)
oath Sept. 29, 2005

Roberts Court 2 (Jan. 31, 2006 to present)
- Sandra Day O’Connor
retired Jan. 31, 2006
- Samuel Anthony Alito Jr.
(G.W. Bush appointee)
oath Jan. 31, 2006

Warren Court 7
(7th different composition of nine Justices during the tenure of Chief Justice Earl Warren.)
MDS (R) Compared with Spring Force Algorithm (Pajek)

1956 Term
(Monday, October 1, 1956 to Sunday, October 6, 1957)

Warren Court 2 (March 28, 1955 – October 15, 1956 1.55 years)

- Robert H. Jackson died Oct. 9, 1954

Warren Court 3 (October 16, 1956 to March 24, 1957 .44 years)

- Sherman Minton retired Oct. 15, 1956
- William J. Brennan, Jr. (Eisenhower appointee) oath Oct. 16, 1956

Warren Court 4 (March 25, 1957 to October 13, 1958 1.55 years)

- Stanley F. Reed retired Feb. 25, 1957
- Charles E. Whittaker (Eisenhower appointee) oath March 25, 1957
1956 Term With Reed (O)

1956 Term With Reed (O)
1956 Term With Whittaker (O)

1956 Term Prior to Whittaker (O)
1956 Term Rendered in Pajek
The Minnesota Twins Story

Two Friends End Up on the Supreme Court

The wedding of Warren Burger and Elvira Stromberg, November 8, 1933. Blackburn, far left, was the best man. The bridesmaid is unidentified.
1970 Term – Their First Together

1985 Term – Their Last Together
Aggregate vs. Specific Topics
(Potential for different spatial distributions)

1994-2003 Non-Unanimous Cases (MDS using R)

THE END