## Unidimensional spatial model

17.251/252

Fall 2012

### Overall map

- Why do we care about theory or explanation at all?
- History of studying Congress
- Politics of Lineland

# I. Why do we care about theory or explanation at all?

- That's what social scientists do
- That's what politicians do
- That's what citizens do

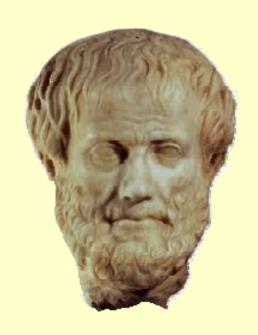
# Different professions have different ways of theorizing about legislatures

- Activists: good guys and bad guys
- Reporters: *individual* stories about good guys and bad guys
- Political scientists: The general, generic, and predictable

# II. Brief history of politically studies science legislative studies and therefore legislative studies

- Early days to ~1880: formalism
- ~1800 to 1950: Progressive history
- 1950 to 1980: Sociology
- 1980 to the present: Economics

### Formalism



## Progressive history

• Wilson, inspired by Walter Bagehot's *The* 

English Constitution





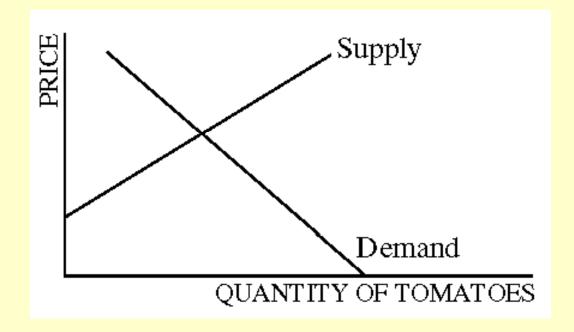
## Sociology

- The group's what's important
- Congress is just a group



### **Economics**

- The individual's what's important
- Collective behavior derives from individual behavior and interest



# How each group would approach the current gridlock in Washington

- Journalism
  - What kind of leader/man is Obama/Boehner/ McConnell/etc.?

# How each group would approach the current gridlock in Washington

- Formalism
  - What does the Constitution say about bicameralism?
- Progressive history
  - Where does the power *really* lie, in the struggle between Congress and the president?
  - The titanic struggle between the monied interests that dominate both parties

# How each group would approach the current gridlock in Washington

#### Sociology

- Who are the actors and what roles do they play?
- What are the factors that constrain actors to stay within their roles?

#### Economics

- Who are the relevant individuals and what are their goals? (Election, policy, power, etc.)
- What are the sets of strategic moves these individuals can make to optimize?

# Advancements in legislative studies

- Our understanding of legislatures has become more precise over time
- Modern legislative analysis focuses on the interaction between individuals and institutions
  - Without institutions, decisionmaking chaotic
  - Heritability problem
- Theoretical primitives
  - Preferences
  - Rules

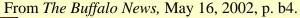
### Logic of next step

- Begin with simple preferences
- How does decisionmaking proceed *without* institutions?
- How does decisionmaking proceed with institution?
- Add complexity and stir

### III. The Politics of Lineland

Though it is rare for a sitting Supreme Court justice to become chief justice, she said, Bush might go for O'Connor because "she doesn't pose a threat to Roe v. Wade," the 1973 decision legalizing abortion.

Bush might like the idea of having O'Connor, the swing vote on the court, as chief justice for just two to three years, after which she likely would retire -- giving the Republican president another crack at altering the court's makeup, Totenberg said.

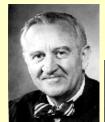
















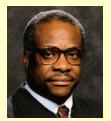












In seven years on the Supreme Court, Justice Anthony M. Kennedy has been neither ideological leader nor political strategist. His writings have drawn little attention from law reviews, and it is part of court lore that he's so little known a group of tourists once asked him to take their picture.

While Kennedy may lack the bold personality or compelling background of other justices, he has earned one important distinction: On a closely divided court, he holds the decisive vote.

Along with Justice Sandra Day O'Connor, Kennedy will be the justice to watch as the court in the weeks ahead decides major cases involving free speech rights, the separation of church and state and the constitutionality of government policies based on race. More often than O'Connor, however, it is Kennedy who casts the fifth -- and deciding -- vote and in recent years he has been in the majority on important cases more than any other justice.

Many of Kennedy's prominent "fifth votes" have led to liberal rulings. But Kennedy is overall a conservative jurist, refusing to expand the role of the courts in American life and believing social policy is best left to elected officials.



















To be sure, the chief justice considers himself the custodian of the Supreme Court's prestige, authority and legitimacy, and he is often its voice in major cases. There was reason, then, to think he might have provided a sixth vote to uphold the law had Justice Anthony M. Kennedy joined the court's four-member liberal wing. That would have allowed Chief Justice Roberts, the thinking went, to write a narrow, grudging majority opinion. But almost no one thought that he would provide the fifth vote, joining only the liberals, to uphold a Democratic president's signal legislative achievement.

. . .

The court Chief Justice Roberts leads is not leaving the national spotlight. The next term already includes a major case on affirmative action in higher education, and cases on voting rights and <a href="majoreae-sex marriage">same-sex marriage</a> are likely to follow. All will test the chief justice's leadership, and the novel alignment in Thursday's case is unlikely to be repeated. In cases concerning the role of race in admissions and voting, he is likely to take his usual place with the court's conservatives. In cases on gay rights, Justice Kennedy is likely to be the swing vote.

From the *New York Times*, June 29, 2012, p. A1

## First days of spatial voting theory

• Harold Hotelling's "grocery store problem"





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# An aside: The origins of social choice

- Marin Mersenne (1611) → Blaise Pascal
- Frans Van Shooten, Jr. (1635)
- Christiaan Huygens (1647, 1655)
- Gotfried Leibnitz (1666)
- Jacob Bernoulli (1684)
- Johann Bernoulli (1694)
- Leonhard Euler (1726)
- Joseph Lagrange (no degree) & Pierre-Simon Laplace
- Simeon Poisson (1814)
- Michel Chasles (1850 [BA])
- H.A. Newton (1850)
- E. H. Moore (1885)
- Oswald Veblen (1903)
- Harold Hotelling (1924)
- Kenneth Arrow (1951) → Eric Maskin (1976) → Drew Fudenberg (1981) & Jean Tirole (1981)
  - Anthony Downs (1954)?
  - Roger Myerson (1976)

Source: Mathematical Genealogy Project

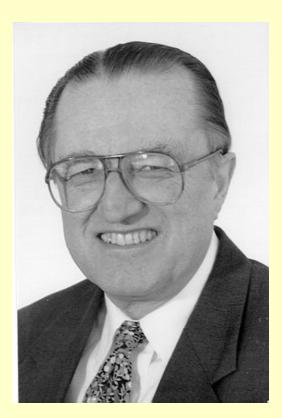
# Downsian model of party competition



L



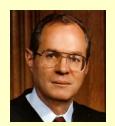
R



### Duncan Black and committees



Abortions free and easy



Abortions regulated



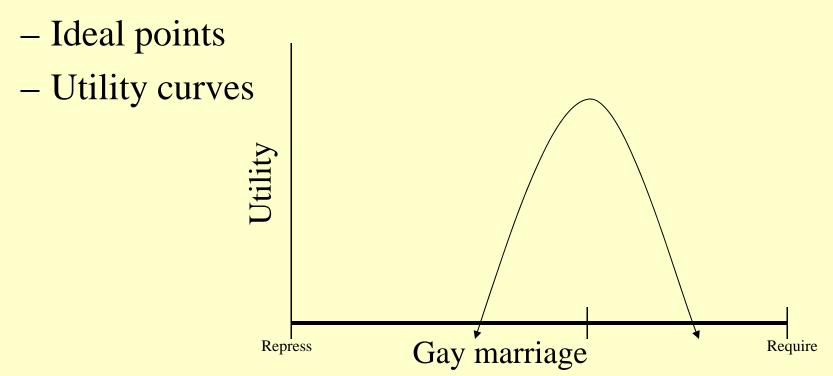
Abortortionists jailed

## More formally

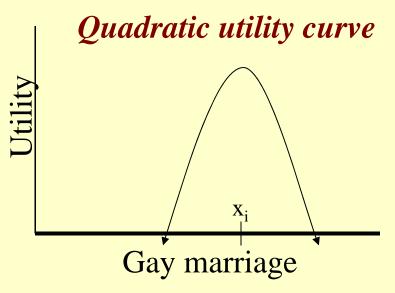
- Preferences
- Alternatives
- Rules

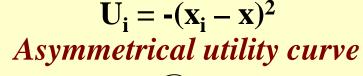
### Preferences

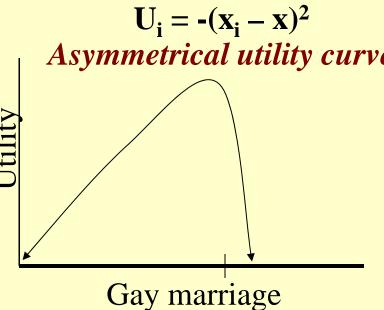
- Dimensionality (1,2,many)
- Location and characteristics of preferences

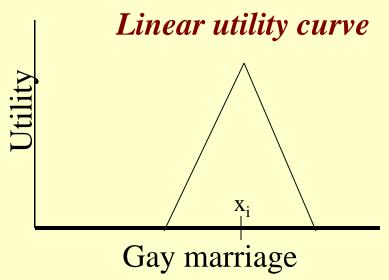


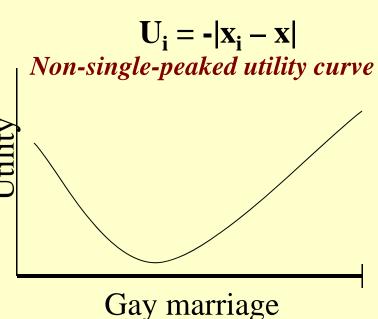
### Different utility curves







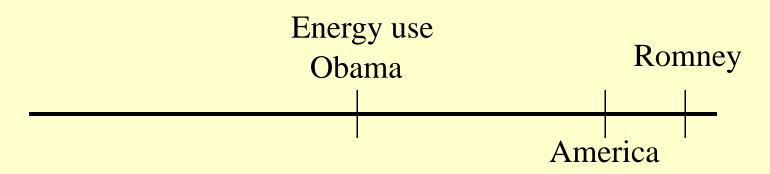


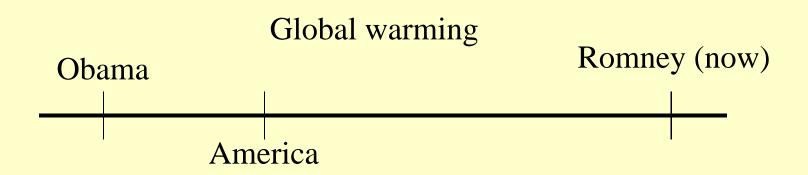


### Alternatives

- Plain English: motions, amendments, etc.
- Expressed in same coordinate system as preferences
- Heresthetics: The art/science of trying to alter the dimensionality of a policy debate
  - Clinton impeachment (private sex vs. perjury)
  - 9/11-related detainees (civil liberties vs. security)
  - Framing of single-sex marriage (sexual orientation vs. "who you love") (see Slate, 9/5/12)

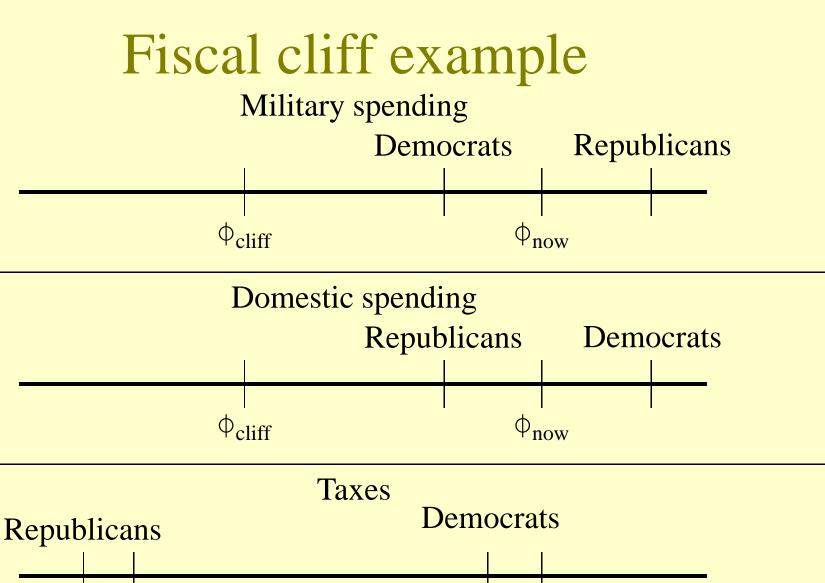
# Framing of Romney/Obama campaign

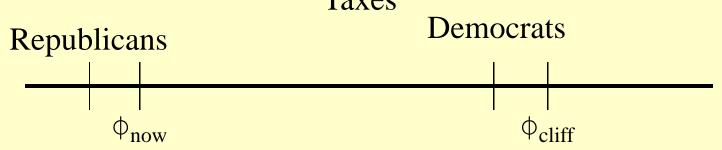




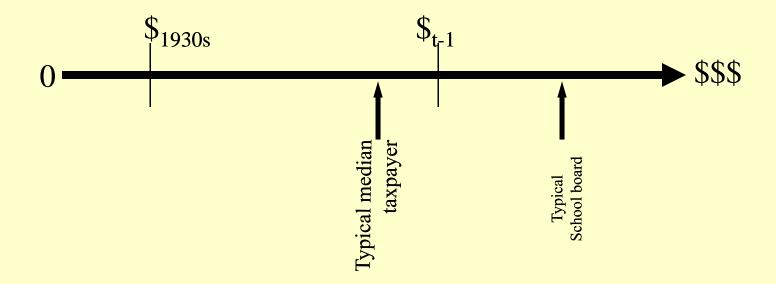
### Reversion point or status quo (\$\phi\$)

- Most important alternative
- Taxing vs. spending: different reversion points





# Public schools in Pacific N.W. (Romer-Rosenthal model)

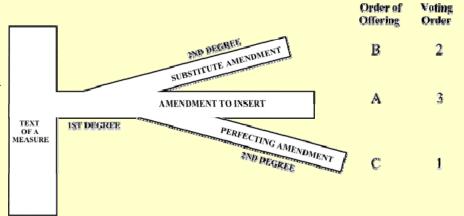


### Rules

#### SENATE AMENDMENT TREE

• Majority requirement

- Simple
- Supermajority



- Agenda-setting process: which alternatives get considered in which order
- Pure majority rule: the frictionless plane of social choice

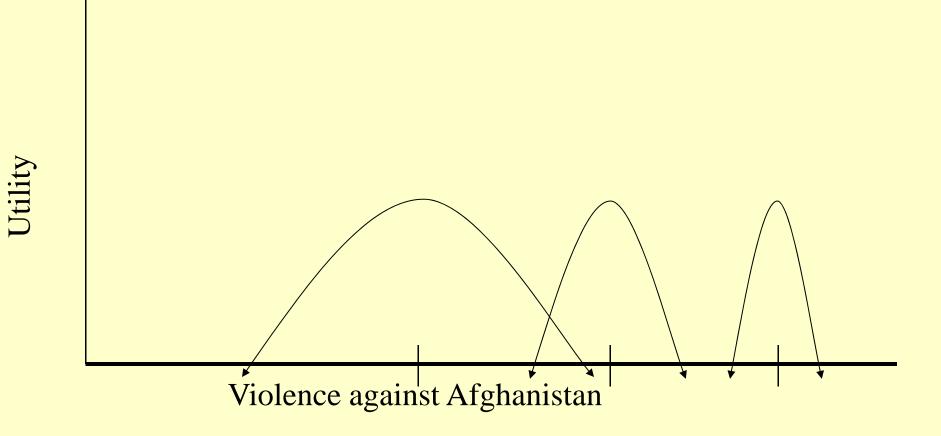
#### Median voter theorem

#### IF

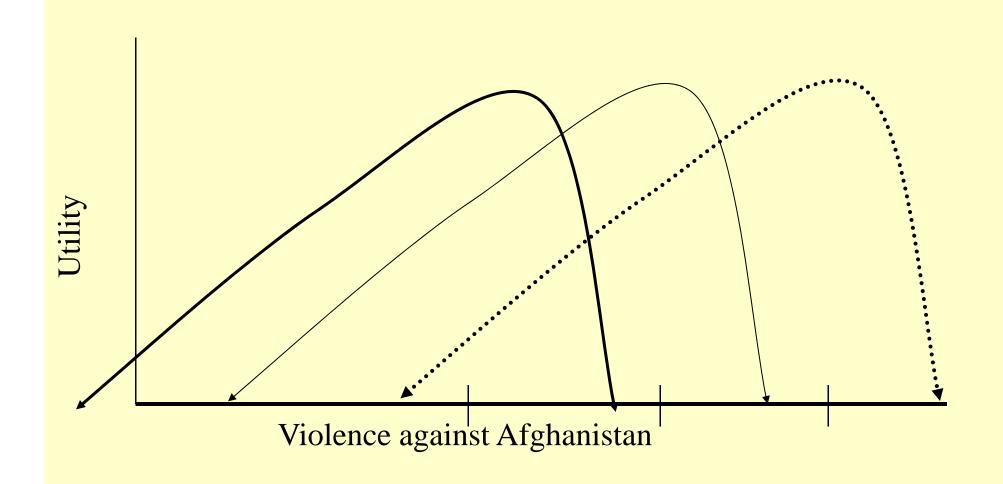
The issue is unidimensional
Voters decide based on their preferences
Preferences are single-peaked
Voting proceeds under pure majority rule

#### **THEN**

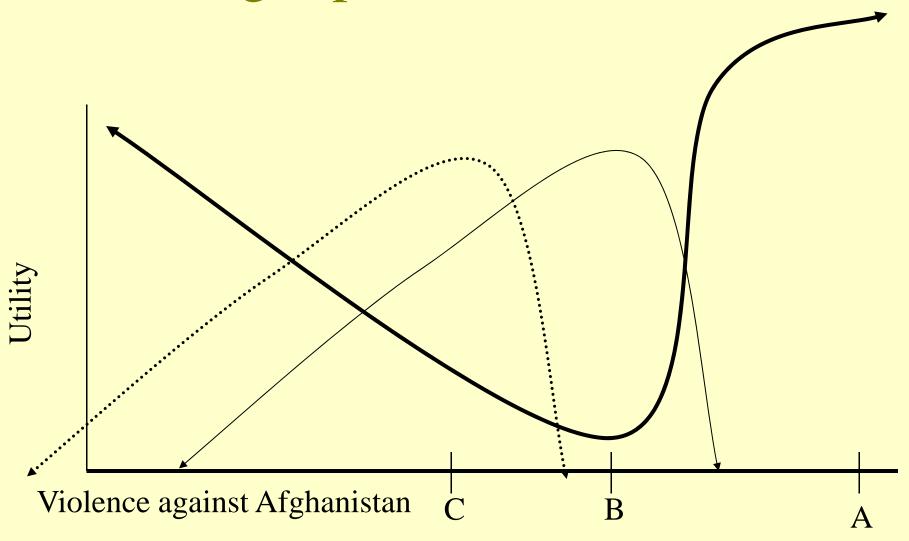
The median voter's ideal point will prevail



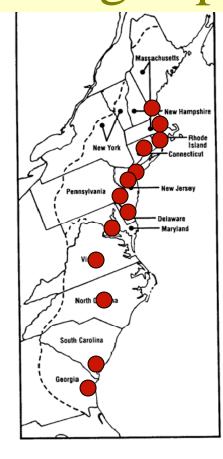
### Symmetry doesn't matter

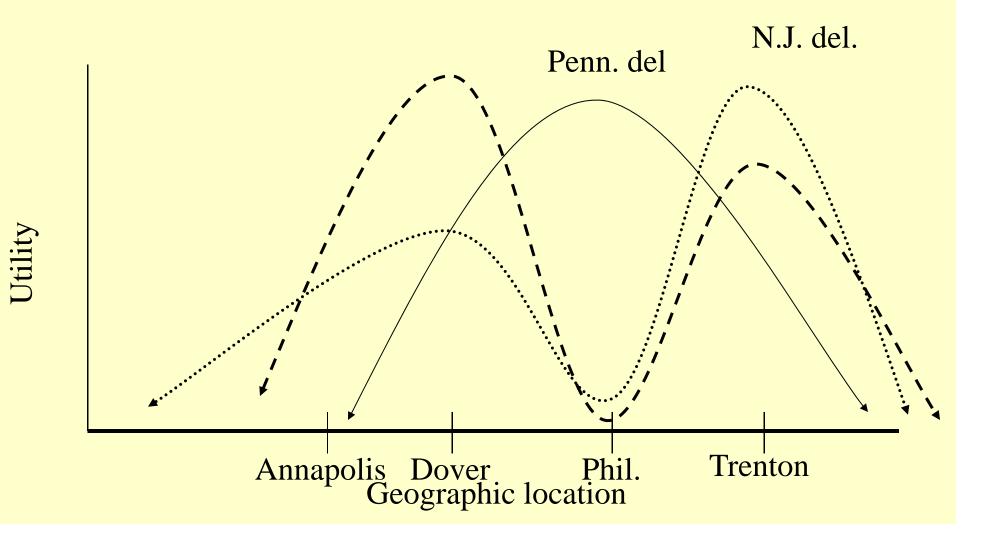


### Single-peakedness matters



# Lack of single-peakedness in picking capitol





# Important corollary to median voter theorem:

Under the same conditions that produce the median voter result (except that preferences are symmetrical), if a committee or electorate is given the choice between two alternatives, the one closer to the median will prevail.

[The median is a dictator]

## Supreme Court Replacement Example (Start in 2005)







## Rhenquist dies (2005)







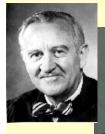
## Roberts appointed (2005)







# O'Connor retires (2006)













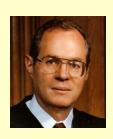


### Alito appointed (2006)













## Souter retires (2009)









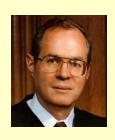




### Sotomayor appointed (2009)











Stevens retires (2010)











Kagan appointed (2010)





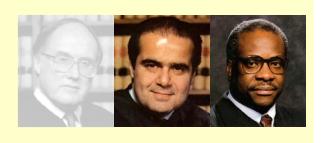




# Net change, 2002-2010







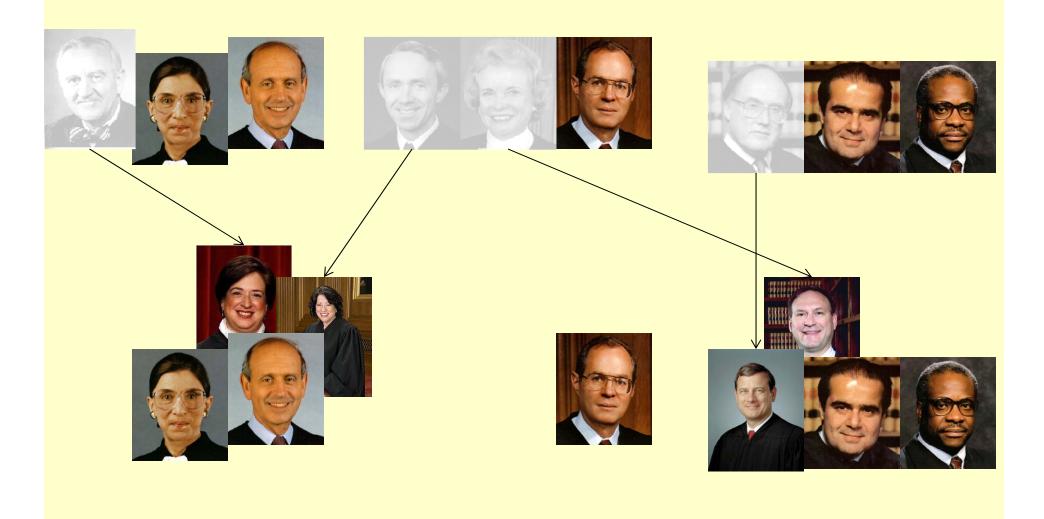








# Net change, 2002-2010



# Supreme Court Appointments under Presidents Romney and Obama











# Who is the median in Congress? (2012 version)









#### 

#### House

(240R, 190D, 5Vac)

Berman (Calif.) Green (Texas) Pastor (Ariz.) Shuler (N.C.) Smith (N.J.) Wolf (Va.) Tipton (Co.) Luetkemeyer (Mo.) Heller (Nev.) Ron Paul (Tex.) Flake (Ariz.)





### 

#### Senate

(51D, 47R, 2I)

Sanders (Vt.) Boxer (Calif.) Stabenow (Mich.) Rockefeller (W.V.) Wyden (Ore.)

Webb (Va.) Nelson (NE) Snowe (Me.) Boozman (Ark.) McConnell (Ky.) Roberts (Kans.)

Paul (K

Source: Keith Poole, http://www.voteview.com