Who wins and who loses in Congress? The strategic calculus of parties and moderates*

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In this paper, we identify and seek to resolve a puzzle about who wins and who loses in votes in Congress. Using roll-call voting data from the House, we show that during the era of the Democratic majority, and spanning at least from 1968 through 1994, moderate and conservative Democrats were *more* likely to be rolled on final passage roll call votes than similarly placed Republicans. After the Republicans took the majority following 1994, this partian gap disappeared.

This asymmetric pattern of behavior is striking since in standard theories of Congress, conditional on ideal points of the members, one should see no difference in roll rates of similarly placed legislators from each party. And in so far as each party seeks to influence their members to vote as a bloc, this should lead to the opposite pattern than what we observe.

We show that the rate at which the Democratic party rolled its own members is not simply an artifact of a bias in the scaling of representatives (e.g., an underestimation of the conservativeness of these Democratic members). Nor is it a product of a distinct Southern voting bloc or a few outliers. The explanation that we are triangulating toward has two parts. First, the Democratic party was able (and willing) to let their own members run against the party on final passage votes without endangering the passage of the legislation. Second, the bills in the Democratic era yielded lower overall minority party opposition than we observe among the minority party members during the Republican era—if Republicans opposed pre-1994 bills as often Democrats opposed bills post-1994, all else equal, there would be no partisan gap.

Along the way to investigating this puzzle we also address the more general question of why the median member is not among the set of Representatives with the lowest roll rates. One of the most important results in social sciences is the decisive role of the median voter in a majoritarian system (Black, 1948). Even in theories of the organization of Congress that expand the set of pivotal members of Congress, both in terms of those who are necessary for supermajority requirements (Brady and Volden, 1998; Krehbiel, 1998) and in terms of the agenda setting power of parties (Cox and McCubbins, 2006), the median voter remains pivotal. Moreover, the floor median is closer to the majority party median than the minority party median (Wiseman and Wright, 2008). As a result, if political issues could be mapped onto a single dimension, the floor median on any given issue should be among the set of Representatives who are not on the losing side of a vote.¹ However,

¹It is often argued that politics is low-dimensional, with a single dimension explain 85 percent or more of votes (Poole and Rosenthal, 1997), and we can identify the median member of Congress with high confidence(Clinton, Jackman, and Rivers, 2004). For a discussion of the robustness of the median voter results, see Hinich XX and

the median floor member is consistently not among the set of least rolled representatives, and fares worse than the median of the majority party (Cox and McCubbins, 2003; Wand, 2010).

1 A PUZZLE

A legislator is "rolled" when she votes against an item that is approved by a majority of the legislature. An individual's "roll rate" is how often this occurs as a fraction of the number of votes that pass on the floor. If an individual (or a coalition of individuals) has the ability to control the agenda in a legislature, then we expect that she will also be able to reduce her likelihood of being rolled.

Figure 1 presents the scatter plots of the individual roll rates of members on final passage votes in the 103rd and 104th Congresses. An individual's roll rate is the proportion of of times that she is rolled conditional on the the number of final passage votes that are passed by the floor. The locations of the individual Representatives on the horizontal axis are plotted by using their rank information, derived from a member's first dimension [What do we call the Tahk rank recovery method? What set of roll calls do we use for this plot?] score in the Congress. The floor median is indicated by F.

Figures 1(c) and (d) show the fitted curves estimated separately for the members of each party. Estimating the shape of the curve separately by party, we discover a significant partial gap in the roll rates during the 103rd Congress with the Republicans being rolled *less often* than moderate Democrats who were in the majority. In contrast, the two party curves during the 104th Congress are essentially continuous. Details on model fitness are presented in the Appendix. This difference between the 103rd and 104th Congresses leads to a puzzle of why moderate Republicans have a lower roll rate in the 103rd Congress.

These observed patterns observed are not unique to this pair of Congresses. Like the 103rd Congress, we find similar discontinuities throughout the era of the Democratic majority from the 83rd Congress through the 103rd. The fitted values for this era are shown in Figure 6 in the Appendix. And like the 104th Congress, we find no gaps in the Republican era that follows. The fitted values for the Republican era are shown in Figure 7, also in the Appendix.

Kramer 1978.



FIGURE 1: Individual roll rates by relative spatial location of members

[Include discussion of 109th and 110th results here]

The puzzle deepens in that applying existing theories of parties and Congress to roll rates produce the expectation that the majority party moderates should be rolled *less* often than the minority party moderates. That there is indeed majority party management of the agenda is further suggested by the fact that the the variability of the counts of rolled individuals (i.e., the dispersion parameters in Table 4) within the majority party is lower than for the minority party. This is consistent with the majority party formulating proposals that achieve consensus among its members while fomenting conflicts within the minority party or systematically co-opting the support of varying sets of minority party members for support on different proposals.

1.1 PARTY DISCIPLINE OVER VOTING

The common feature of party-influence voting models is that they are most likely to affect the behavior of conservative Democrats and liberal Republicans (which we refer to simply as moderates as a category, despite the occasional descriptive inaccuracy of the term). Assuming that a party could influence the votes of its members, we expect that the party will make members vote with the majority of their caucus. Moderates would be influenced to vote with their coalition both in passing and defeating proposals, even when they might prefer to oppose a measure. Conversely, a moderate minority legislator who might otherwise prefer a bill that passes may be induced to vote against it and appear to be rolled. As such, party discipline should *lower* the roll rate of the majority party relative to the minority party, in particular among the moderate members.

Consider the case of perfect party discipline, party line voting would produce a zero roll rate for the majority party—only bills supported by the majority would pass, and all members would vote in support. The roll rate of the minority party would reflect how often they opposed bills supported by the majority party. A non-spatial model with similar logic was proposed as a thought experiment by Krehbiel (2007). This class of non-spatial model, however, is not consistent with any of the House data.

A weaker form of party discipline could imply an increased likelihood of members of a party voting together. One such model is the two-cutpoint model of McCarty, Poole, and Rosenthal (2002). In this scenario, majority members would again be expected to be rolled less often than minority members. When most of the majority party supported a bill moderates of that party would be more likely to support it (even if they preferred to oppose in the absence of party influence), and it be more likely to pass, thus lowering the roll rate of the majority party moderates. When the majority caucus opposed a proposal, party influence would increase the likelihood that it would be defeated (even if the moderates otherwise support it), and hence it would not be part of the roll rate calculation. Conversely, moderate minority members would have the opposite pressure to oppose bills supported by the majority party, thus increasing their roll rates. But even this modified model is not consistent with the partisan gap that is observed: the majority party moderates are rolled *more* often than the minority members

1.2 Agenda

Two main classes of models have been proposed for how pivotal players or groups may affect the legislative agenda. Cox and McCubbins (2006) argue that the majority party possesses agenda setting power to block consideration of bills opposed by a majority of their caucus. Supermajority pivot-based theories (Brady and Volden, 1998; Krehbiel, 1998) incorporate the obstructive powers of different branches of government into lawmaking process, and predict a gridlock interval between the veto pivot and the filibuster pivots within which no status quo could be changed by legislative act. But neither of these classes of theories result in a partian discontinuity in roll rates because roll-call voting on final passage votes is entirely determined by spatial preferences.

A majority party may not only seek to avoid votes that they see as undesirable, but they may also seek to formulate proposals designed that also accentuate the policy difference between the parties. Hacker and Pierson (2005) among other argue that the new Republican majority actively sought to force votes to marginalize the role of Democrats in the 104th Congress. If this were the case, a member of the minority at the same spatial location as a majority would again have a *higher* roll rate.

2 Measuring moderates

Now that we have discussed how canonical models of roll-call voting and partian influence cannot explain observed roll rate patterns, we consider whether the partian gap in roll rates observed in Figures 1 and 6 is merely an artifact of the measurement of preferences or a simple result of outliers. Along the way, we examine the various ways that an individual representative ends up being a moderate (and by extension any other location in the ideological space).

We begin with the question of whether the partisan roll rate gap is an artifact. If the moderate and conservative Democrats were scaled to be slightly more conservative (relative to the most liberal Republicans), the roll rate curves of each party could in principle be aligned. The answer lies in whether there is a principled measure of ideal points that produces such a shift that would remove the partisan discontinuity. We have not found such a measure in one dimensional scaling.

In our investigation we began as a starting point roll call votes that did not relate to final passage of a bill, and proceeded to eliminate votes that might be attenuating the conservative extremism

Party-line	Ν	D & R	D & R
Percent Q	votes	Homog	Homog
Threshold	kept	χ^2	p-value
100	987	24.91	0.00
99	869	22.96	0.00
98	820	20.87	0.00
97	793	18.08	0.00
96	774	16.71	0.00
95	750	14.54	0.00
94	724	12.85	0.00
93	710	11.86	0.00
92	687	10.88	0.01
91	664	9.05	0.03
90	632	6.15	0.10
89	604	3.87	0.42
88	571	2.36	0.67
87	540	2.51	0.64
86	517	5.88	0.44
85	490	11.23	0.08

TABLE 1: Testing homogeneity of roll rate curves using ideal points estimated from subsets of non-final-passage roll call votes in 103rd Congress. In each row of the table, only votes that have less than Q percent within party agreement are included.

among Democrats. Most importantly is the question of whether party-line votes (particularly procedural votes) biases conservative Democrats to look artificially moderate.

Consider deleting votes where party-line voting occurs either in both parties on a vote and when party-line voting occurs only within the majority party. In Table 1 votes from the 103rd Congress are progressively eliminated, and the test of homogeneity recalculated. It is not until we hit a definition of unity of 90 percent and as a result drop 1/3 of the roll call votes that we fail to reject the homogeneity of the partisan roll rate curves. Though this exercise can eliminate the discontinuity, the amount of data that must be dropped and the low level of the unity threshold suggests that party-line voting does not explain the puzzle at hand.²

Nor is the excessive roll rates among Democrats attributable to a southern bloc of represen-

²More generally, the biases of dropping lop-sided votes for the estimation of ideal points has already been discussed McCarty et al. (2002); Cox and Poole (2002)





(b) Average by party and region 104th

FIGURE 2: Individual roll rates by relative spatial location of members. Democrats estimated separately by region (dashed line: Southern; solid line: non-Southern). Ideal points estimated from non-final passage votes excluding any vote where both parties are internally in agreement at a level of 98 percent or greater.

tatives. In Figure 2, the fitted probabilities for Democratic roll rates estimated separately for Southern and non-Southern representatives. Both the Northern and the Southern representatives are significantly different from the Republicans in terms of the shape of their roll rate curves.

Finally, the partisan gap is not simply a product of a small number of extreme Democrats. The list of legislators from each party with overlapping ideal points is shown in Table 2. The Democrats represent a range of districts and geographic location, from Minnesota to Texas. We sequentially deleted Democrats, starting with Gene Taylor (D-MS05) and moving left. The representatives deleted are indicated by asterisks. By the time we create no overlap between the parties, deleting all the way to Condit, the p-value of the difference partian gap rises to 0.07—far less of a rise than would suggest that these few conservatives solely produce the puzzle.

3 The structure of roll rates

It is not particularly surprising to find that conservative Democrats were rolled more often than their partisan colleagues who were more typical of their party. What is odd is that they are rolled

Name	Party	$\mathrm{State}/\mathrm{CD}$	Rank	Roll rate
Parker	D	MS-4	248	0.23
Morella	R	MD-8	249	0.06
Gilman	R	NY-20	250	0.17
Condit*	D	CA-18	251	0.30
Penny*	D	MN-1	252	0.40
Orton*	D	UT-3	253	0.34
Hutto*	D	FL-1	254	0.26
Tauzin*	D	LA-3	255	0.31
Boehlert	R	NY-23	256	0.15
Fish	R	NY-19	257	0.20
$Stenholm^*$	D	TX-17	258	0.43
Hall*	D	TX-4	259	0.41
Shays	R	CT-4	260	0.36
Houghton	R	NY-31	261	0.26
Johnson	R	CT-6	262	0.21
Snowe	R	ME-2	263	0.32
Smith	R	NJ-4	264	0.26
Roukema	R	NJ-5	265	0.34
Leach	R	IA-1	266	0.27
Gillmor	R	OH-5	267	0.39
Horn	R	CA-38	268	0.16
Bateman	R	VA-1	269	0.33
Machtley	R	RI-1	270	0.16
Gallo	R	NJ-11	271	0.33
Taylor*	D	MS-5	272	0.43

TABLE 2: 103rd Congress Representatives located in the interval where parties have overlap in their member's ideal points. "Ranks" refers to ideological rank, where 1 is most liberal.

more than their Republican counterparts with otherwise similar voting records. We first examine other, non-spatial explanations.

In this section we (begin to) explore the structure of roll rates, comparing roll rates both across individual representatives, groups of representatives and across time.

3.1 UNPACKING THE MOTIVES FOR BEING ROLLED

A member voting against her party can both signal independence from their party's leadership (and its agenda) and deprive a challenger from potential campaign material. And the signal of independence may be particularly powerful when the legislator is rolled by her own party. This can be seen to be the opposite of party discipline: running against the party.

Underlying this idea is that there is a distinction between the private and revealed behavior of representatives. Such an idea has been introduced by Van Houweling (2003). Van Houweling (2003) notes that representatives may vote for closed rules that restrict their choices to extreme alternatives, thereby being able to vote for extreme policies without having to vote against moderate policies. The theory is exemplified in his description of the 2001 Bush tax cuts, where (apparently) moderate Republicans supported a special rule to eliminate the option of a moderate alternative.

While Van Houweling (2003) emphasizes how this logic can contribute to increased polarization and non-median outcomes, the ability of representatives to acheive their preferred outcome without having to take responsibility for it may also be applicable to our puzzle. The complementary theory would be that conservative Democrats are not as conservative as they seem, but rather are supportive of all the preliminary work necessary for the consideration of the bill, so long as they do not have to go on record voting for it during final passage. If this is the case, then we should observe conservatives supporting the bill and then opposing the bill on final passage. Prior studies of switching behavior include Krehbiel (1998) and Young and Wilkins (2007)

[Results from rules/switching forthcoming]

Under this theory of consensual defection by majority moderates, it would be a misnomer to call this the product of *party discipline* among the majority party—the moderates are getting their preferred outcome without having to go on record voting for it. In contrast, standard theories see party line voting on procedural votes as simply easier to enforce than on final passage votes (Dion and Huber, 1996; Young and Wilkins, 2007).

If this is the case, then the most conservative Democrats are "excessively" rejecting bills (relative to their measured ideology) and the liberal Republicans can be seen to voting appropriately. Thus the partisan gap would be the byproduct of electorally opportunistic Democrats playing (even more) conservative on final passage votes.

One piece of data that suggests that this may not be the case, however, is that the roll rates for the Republicans are abnormally low, relative to historical standards. Figure 3 superimposes the 103rd and 104th Congress roll rates. The solid line on the right is the roll rates of the Republicans during the 103rd Congress. The dashed lines are from the 104th Congress, which matches up with the other solid curve which illustrates the 103rd Democrats roll rates.



FIGURE 3: 103rd and 104th roll rates, superimposed, and using the mirror image of the 104th curve.

3.2 The structure of being rolled

A fundamental question is whether there is structure to when representatives within and across parties are rolled. The extent to which individuals are rolled seemingly at random, but at different rates, there is little interest. Our interest lies in where the representatives from each party, particularly in the interval of overlapping ideal points, get rolled together.

A preliminary view of the frequency of "group" rolling is summarized in Table 3 by looking at the rate at which the individuals in Table 2 acted alone or in concert. Each final passage vote was classified according to two measures. One measure is whether more than half of the liberal Republicans were rolled. Another is whether more than half of the conservative Democrats were rolled. Votes where no individual were rolled are excluded.

What we observe is that about the majority of votes either there was a smattering of individuals rolled (P(R roll) < .5 and P(D roll) < .5), or the bulk of Representatives from both parties were rolled. These are not, however, driving the partian gap in the rates of being rolled. The gap is

	P(R roll) < .5	$P(R \text{ roll}) \ge .5$
P(R roll) < .5	49	8
$P(D \text{ roll}) \ge .5$	23	12

TABLE 3: Frequency of idiosyncratic and group behavior within and across parties.

result of the much greater occurrence of Democrats acting in concert and being rolled while most Republicans were voting for the bill. The converse occurs only 1/4 as often.

[More results on the structure of who is rolled, and which bills they are rolled on are forthcoming].

4 Prior studies

In the context of adjudicating among theories of agenda setting, individual roll rates on final passage votes have previously been considered by Cox and McCubbins (2003), Den Hartog (2005), Carson, Monroe, and Robinson (2009), and Wand (2010). Relatedly, Lawrence, Maltzman, and Smith (2006) study win rates.

In their statistical study of roll rates and agenda setting, Carson et al. (2009) evaluated the effects of the majority party change on the roll rates of Democrats and Republicans. To do so, they modeled roll rates to be a function of the distance from the median, with a possible discontinuous shift for each party and members of the majority party. Specifically, the probability of being rolled is modeled as,

$$y_{it} = f(x_{it}) = \Lambda \left(\alpha_0 + \alpha_1 P_{it} + \alpha_2 Q_t + \alpha_3 P_{it} \times Q_t + \alpha_4 \mid x_{it} - F_t \mid \right)$$

wherein they jointly estimate roll rates y_{it} in the 103rd and 104th Congresses. The indicator variable " P_{it} " equals 1 if member *i* is in the majority party, and " Q_t " is an indicator variable for observations from the 104th Congress. The function $\Lambda(z) = 1/(1 + \exp(-z))$ is the logit link function.

The authors provide their interpretations of the parameters in terms of the median voter and cartel theories. If $\alpha_1 = \alpha_2 = \alpha_3 = 0$, then this model is consistent with comparative statics



FIGURE 4: Fitted roll rates using Carson et al model specification

produced by a median voter model with a uniform distribution of status quo locations symmetric around the floor median. The authors interpret $\alpha_1 < 0$ and $\alpha_4 + \alpha_3 > 0$ as providing evidence of cartel behavior, although no parameters values in this model can produce a curve that coincides with any of the range of cartel shapes described in Wand (2010).

Based on their statistical model, Carson et al. (2009) conclude that "even controlling for distance from the floor medians, legislators are significantly less likely to be rolled if they have the benefit of being in the majority party." As a statement about average effects, this is correct. However, comparing the B-spline and Carson et al models we come to quite different insights into the direction and size of the partisan gap among moderate members from each party. Figure 5 presents plots of fitted values from the Carson et al model.

While the Carson model does capture the average difference between the parties, and the average effect of distance from the median, it misses key aspects of how these two variable interact to affect roll rates. In contrast, the Carson model produces the appearance of a large discontinuity in the roll rates between the parties in the 104th congress where the separate spline models find none, and a large positive gap in the 103rd where the spline models reveals a gap in the opposite direction. Moreover, the Carson model also produces the result that minimum roll rate is at the median voter, which as discussed above does not actually discriminate between the models under a range of status quo distributions. The model also fits much worse. The log-likelihood of the Carson model pooled model is -50803, and the dispersion parameter ϕ is 8.2, whereas the B-spline models have a combined log-likelihood of -49097 and a dispersion of 3.6. This is an example where substantively important patterns are not only missed but actually portrayed to be the opposite by a statistical model with an overly restrictive and inappropriate functional form.

5 DISCUSSION

In this paper we have documented a partisan gap in individual roll rates in the U.S. House during the era of the Democratic majority, the 94th-103rd Congresses. This previously unknown pattern is particularly striking because it cannot be rationalized with canonical models of roll-call voting and agenda formation that predict no partisan discontinuity in roll rates or lower roll rates for members of the majority party, patterns that are rejected in the data during this era. We show that the partisan gap cannot be easily explained away by measurement error in legislative preferences or as the result of a few outlying legislators.

The analysis leaves us with several outstanding puzzles. The partian gap suddenly vanishes during the 104th Congress when Republicans gained a majority in the House and throughout the Republican majority. What factors in the congressional environment caused the partian roll rates to converge? [Include discussion of 109th and 110th results here.]

6 Appendix

Table 4 provides the fit statistics and hypothesis tests, showing that the function is significantly discontinuous between the parties in the 103rd, but not significantly discontinuous in the 104th.

	103rd	104th
Log-likelihood		
Model 4: Unrestricted, by party		
(a): Dem	-8608.2	-16779.8
(b): Rep	-16784.4	-6924.2
Dispersion (ϕ)		
Model 4: Unrestricted, by party		
(a): Dem	2.1	3.6
(b): Rep	3.1	2.0
Hypothesis tests		
Model 3 vs Models $4(a)+4(b)$:		
$ar{\chi}^2$	25.6	.32
$P(>\bar{\chi}^2)$	<.001	.83

TABLE 4: Fit and comparison of models of roll rates. Binomial likelihood estimated separately for each party without constraints on B-spline parameters.



FIGURE 5: Roll rates during the Democratic majority era



FIGURE 6: Roll rates during the Republican majority era

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