

08 February 2016

1 Overview

The main tasks I set out to accomplish over week as per our last meeting were as follows:

- Check that we were sorting lopsided and close votes correctly
- Figure out who is being sorted as an extremist and not as complying to party calls
- Redo DV/IV regressions with both IVs by party and majority/minority status
- Test adding different levels of randomness to the initial lopsided/close vote seeding

After checking the first item, I worked on the others. I include the plots and tables most relevant to these below.

Over the course of this week, I continued digging into the old functions and comparing them with the new functions. I found four differences which I had previously missed. The first of these I discussed with you through email. We had moved to allowing the function to stop not only when the number of switched votes dropped below a certain threshold, but also when the number of switched votes began rising again. This is in line with the 2013 paper. Having run the algorithm with our new stopping rule, I find it to have only a negligible impact on vote sorting. Summary tables for this sorting are included.

The second through fourth, I found later in the week and thus saved for the update. None of them seem promising. The first is that we have begun dropping votes which had 4 or fewer Senators on one side. I was unable to find anything which mentioned their exclusion or inclusion in the 2013 paper or its appendices, so I looked into them. Running a single iteration of the sorting function manually initially led to more party calls than a counterpart without them, but running the algorithm all the way through proved to lead to a much larger increase in noncalls. Additionally, in the previous Senate Party Calls we were sorting votes by OLS rather than a bias-reduced logit and had party line votes dropped rather than coded as definite party calls. The first of these leads the current algorithm to be more like the one used for the 2013 paper and the second makes sense theoretically and could not possibly be driving the differences we are seeing.

2 Tables and Figures

2.1 Digging into $p < 0.05$ Party Call Coding

I first show plots in which characteristics I thought likely to go along with non-responsiveness are broken down by party. These are followed by tables of some particular outliers that we have. I found that the switch in responsiveness seems to happen around the ideological extremism value of 1 for both Democrats and Republicans and so I provide tables of MCs who are above this threshold and non-responsive. Finally, I conducted regression analysis with party call responsiveness as the DV and noncall response and extremism as IVs.

Figure 1: Main DV and Ideological Extremism - Majority and Minority Party Democrats
Note: The light gray line and dots are for Congress 107.

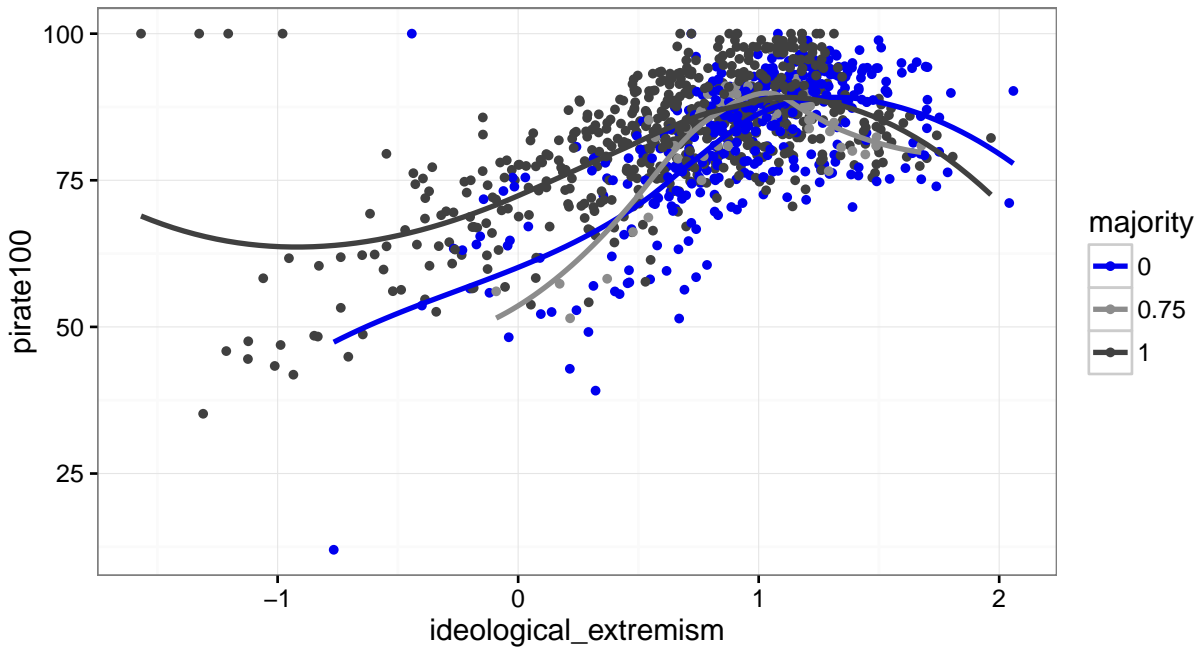


Figure 2: Main DV and Ideological Extremism - Southern and Other Democrats

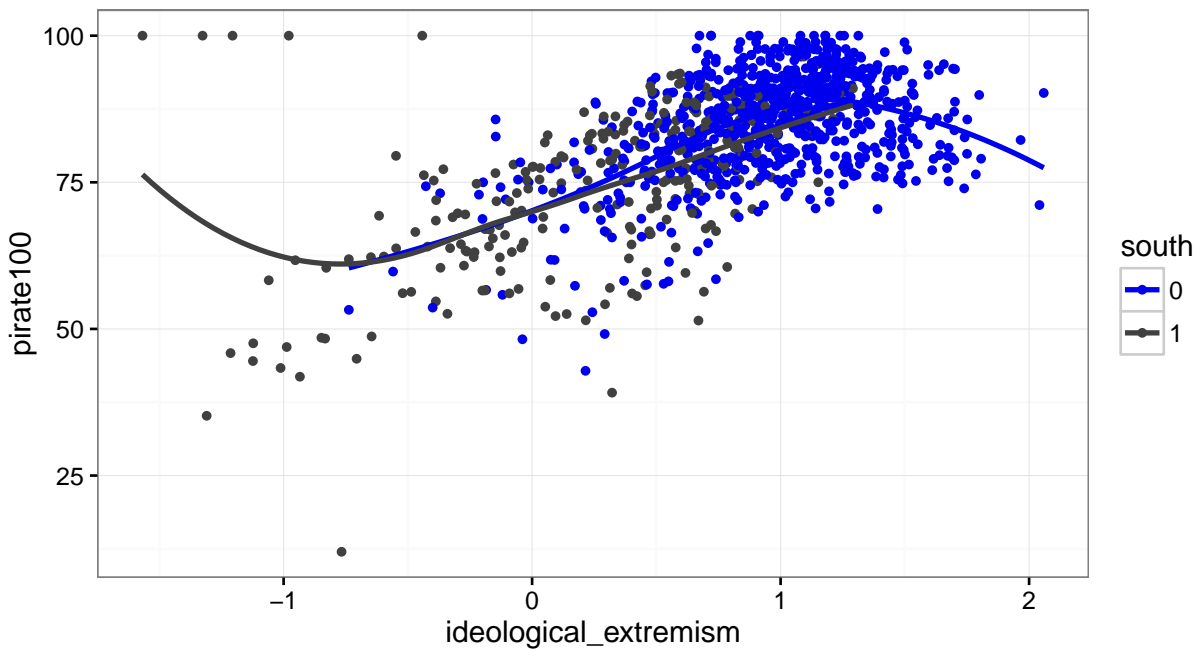


Figure 3: Main DV and Ideological Extremism - Majority and Minority Party Republicans
Note: The light gray line and dots are for Congress 107.

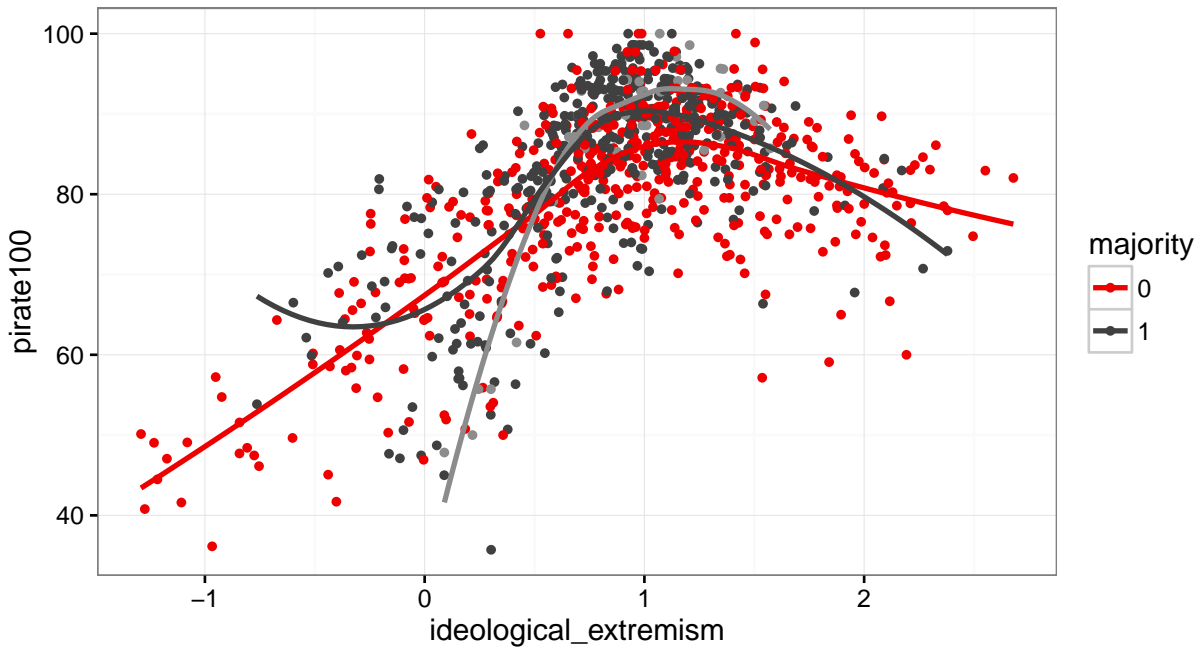


Figure 4: Main DV and Ideological Extremism - Southern and Other Republicans

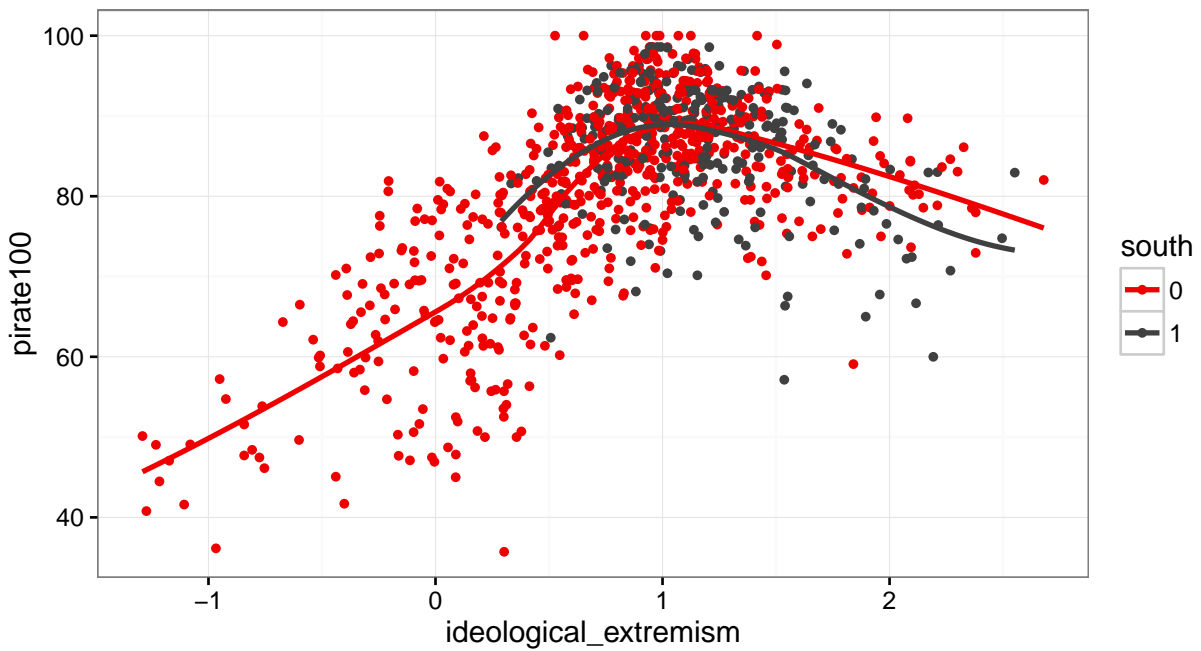


Figure 5: Main DV and Ideological Extremism - Gingrich Senators and Other Republicans

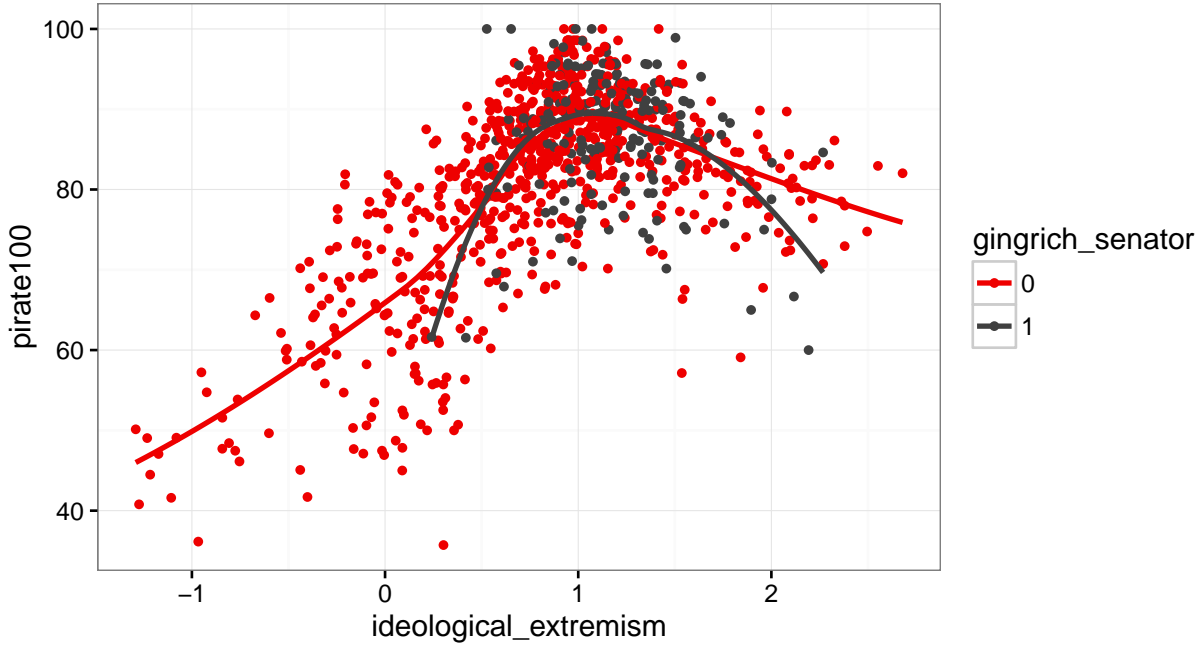


Table 1: Democrats With Extremism > 1 and Party Call Response $< 75\%$

congress	mc	votes	pres vote	extremism	pfrate100	pirate100
95	ABOUREZK (D SD)	642	0.49	1.14	70.56	70.55
96	LEAHY (D VT)	972	0.44	1.00	86.56	74.76
97	RANDOLPH (D WV)	964	0.52	1.02	85.06	72.58
97	WILLIAMS (D NJ)	443	0.43	1.20	84.57	71.67
97	KENNEDY (D MA)	880	0.50	2.04	82.68	71.12
97	PELL (D RI)	951	0.56	1.12	77.89	72.11
97	CRANSTON (D CA)	873	0.41	1.49	79.21	74.81
97	METZENBAUM (D OH)	883	0.44	1.74	85.37	73.96
97	TSONGAS (D MA)	865	0.50	1.39	78.63	70.44
97	BRADLEY (D NJ)	917	0.43	1.25	82.76	74.65
101	BIDEN (D DE)	626	0.44	1.03	79.17	73.29
101	BRADLEY (D NJ)	625	0.43	1.19	75.73	73.46

Table 2: Republicans With Extremism > 1 and Party Call Response < 75%

congress	mc	votes cast	pres vote	extremism	pfrate100	pirate100
93	GOLDWATER (R AZ)	788	0.67	1.81	73.70	72.83
93	MCCLURE (R ID)	967	0.71	1.38	76.39	72.28
93	SCOTT (R VA)	1000	0.69	1.55	69.64	67.52
93	HELMS (R NC)	1083	0.71	2.10	72.10	72.42
94	GOLDWATER (R AZ)	804	0.67	2.09	69.56	73.64
94	SCOTT (R VA)	1153	0.69	1.87	64.01	74.07
94	HELMS (R NC)	1276	0.71	2.04	65.90	74.62
95	YOUNG (R ND)	935	0.53	1.00	85.69	74.55
98	SYMMS (R ID)	615	0.73	2.38	70.79	72.95
98	HELMS (R NC)	648	0.51	1.96	70.49	67.76
98	EAST (R NC)	624	0.51	2.27	69.13	70.73
98	NICKLES (R OK)	646	0.63	1.54	74.26	66.36
99	NICKLES (R OK)	739	0.69	1.02	83.08	70.40
100	HELMS (R NC)	737	0.62	2.50	68.29	74.77
101	HELMS (R NC)	633	0.58	2.07	74.92	72.22
101	HUMPHREY (R NH)	615	0.63	1.44	75.74	71.88
110	BUNNING (R KY)	636	0.60	1.37	85.98	73.85
110	KYL (R AZ)	644	0.55	1.46	83.99	70.15
110	COBURN (R OK)	607	0.66	1.90	81.08	65.00
110	VITTER (R LA)	628	0.57	1.34	87.32	74.63
110	DEMINT (R SC)	634	0.59	2.12	82.44	66.67
110	SESSIONS (R AL)	643	0.63	1.15	88.37	70.15
110	ENZI (R WY)	636	0.70	1.39	87.62	72.46
112	DEMINT (R SC)	431	0.55	2.19	77.96	60.00
112	PAUL (R KY)	462	0.58	1.54	74.46	57.14
112	LEE (R UT)	472	0.65	1.84	76.15	59.09

Table 3: Main DV and IV Regressions

	Democrats	Republicans	Majority	Minority
pfrate100	0.879*** (0.028)	0.847*** (0.026)	0.895*** (0.026)	0.777*** (0.030)
ideological_extremism	0.810 (0.527)	2.350*** (0.444)	1.442** (0.481)	2.471*** (0.529)
(Intercept)	7.695*** (2.098)	10.332*** (1.955)	6.442** (2.026)	15.341*** (2.192)
R ²	0.666	0.669	0.694	0.631
Adj. R ²	0.665	0.668	0.694	0.630
Num. obs.	1039	951	1049	843
RMSE	6.433	6.758	6.093	7.120

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

2.2 Senate Vote Coding With Semi-Random Initial Noncalls

In order to test a combination of first round noncalls being selected by lopsided or close votes and random chance I added a model parameter which can randomly switch a certain percent of the close and lopsided votes. In order to test this, I ran the algorithm with 25, 50, and 75 percent of these switched as well as one with all selected at random. Of these, the 50% would be the most similar in its parameters to random selection and the 75% is like reverse selection with a 25% switch. These otherwise matched the current sorting algorithm we have been using (with the agreed upon $p < 0.05$ threshold). These performed roughly the same as one another, showing that our initial selection has little to no influence on the performance of the sorting function.

Table 4: Senate Coding with 25% of Votes Initially Switched by Congress

congress	party calls	noncalls	gray votes
93	350	590	4
94	407	689	0
95	277	710	2
96	348	535	3
97	322	424	30
98	216	316	8
99	186	445	5
100	213	378	13
101	162	322	4
102	132	323	5
103	135	473	13
104	157	598	36
105	89	365	12
106	110	394	10
107	69	367	7
108	70	418	11
109	87	414	5
110	71	442	10
111	94	499	12
112	44	344	4
Total:	3539	9046	194
Mean:	177.0	452.3	9.7
sd:	109.9	117.8	8.9

Table 5: Senate Coding with 25% of Votes Initially Switched by Lopsided/Close

	party call	noncall	gray
Lopsided	1397	4180	109
Close	2142	4866	85

Table 6: Senate Coding with 50% of Votes Initially Switched by Congress

congress	party calls	noncalls	gray votes
93	350	590	4
94	407	689	0
95	277	710	2
96	348	535	3
97	323	423	30
98	219	315	6
99	184	441	11
100	212	378	14
101	160	324	4
102	131	325	4
103	136	474	11
104	158	605	28
105	90	364	12
106	109	393	12
107	69	367	7
108	72	418	9
109	87	414	5
110	71	444	8
111	92	500	13
112	42	346	4
Total:	3537	9055	187
Mean:	176.9	452.8	9.4
sd:	110.2	118.1	7.8

Table 7: Senate Coding with 50% of Votes Initially Switched by Lopsided/Close

	party call	noncall	gray
Lopsided	1398	4179	109
Close	2139	4876	78

Table 8: Senate Coding with 75% of Votes Initially Switched by Congress

congress	party calls	noncalls	gray votes
93	350	590	4
94	407	689	0
95	277	710	2
96	348	535	3
97	336	429	11
98	217	322	1
99	185	444	7
100	212	376	16
101	160	324	4
102	132	324	4
103	129	468	24
104	158	604	29
105	89	365	12
106	109	391	14
107	67	367	9
108	71	419	9
109	86	415	5
110	71	441	11
111	93	499	13
112	42	346	4
Total:	3539	9058	182
Mean:	177.0	452.9	9.1
sd:	111.4	117.6	7.5

Table 9: Senate Coding with 75% of Votes Initially Switched by Lopsided/Close

	party call	noncall	gray
Lopsided	1418	4177	91
Close	2121	4881	91

Table 10: Senate Coding with 75% of Votes Initially Sorted Randomly by Congress

congress	party calls	noncalls	gray votes
93	350	590	4
94	407	689	0
95	277	709	3
96	348	535	3
97	321	424	31
98	218	312	10
99	185	442	9
100	213	376	15
101	154	327	7
102	132	322	6
103	137	474	10
104	158	604	29
105	90	365	11
106	106	391	17
107	69	367	7
108	71	416	12
109	87	414	5
110	74	439	10
111	94	499	12
112	42	346	4
Total:	3533	9041	205
Mean:	176.7	452.0	10.3
sd:	110.0	118.2	8.0

Table 11: Senate Coding with Votes Initially Sorted Randomly by Lopsided/Close

	party call	noncall	gray
Lopsided	1403	4167	116
Close	2130	4874	89