Update: 11 January 2017

In the last week I have focused on the Senate data since I recognized too late that we did not have data on retirement or committee assignments readily available for House 110 - 112. I found what I believe to have been the causes of cases dropping from the previous method for building Senator year data which William and I were building this previously. It appears that the way the current package handled Senators who had served discontinuous terms had caused them to be removed by other parts of the script. When these parts of the script were adjusted, these individuals remained in the data. These updated scripts were partly relied upon in the process of getting the data built with the LES data we got from Alan.

The first set of tables included are summary stats for the variables used in our Senate models (along with a few extras) from this data, separated by party. Additionally, I have used this data to rerun the Senate tables for the `emIRT` only sorting algorithm. I find that initially, high collinearity between presidential vote share seems to hide the relationship between ideological extremism and responsiveness to party calls for Democrats. This carries over into the majority model (though not the minority model). However, removing this variable from the model does not change Unfortunately, looking at the figure this produces shows that this problem holds across our data as it is now.

As it stands, my plan for the coming week is to get the House data we need to finish the package and to try to determine if there is something throwing off our Senate figures. The former I am confident in my ability to do (given enough time) and guidance would be appreciated on the latter. Please let me know if any of the summary statistic values look particularly odd to you (for instance, 70% of members serving on a Senate power committee seems fairly high to me). Alternatively, if you have other variables you think I would be wise to investigate for other reasons I would appreciate guidance on that as well.

Statistic	Mean	St. Dev.
class	1.954	0.846
pres_vote_share	0.485	0.093
votepct	60.596	9.735
south	0.233	0.423
south11	0.212	0.409
south13	0.236	0.425
south17	0.342	0.475
leader	0.082	0.274
chair	0.180	0.385
best_committee	3.767	2.738
power_committee	0.722	0.448
up_for_reelection	0.334	0.472
freshman	0.333	0.471
superfreshman	0.023	0.152
seniority	5.704	4.963
retiree	0.061	0.240
afam	0.006	0.075
female	0.086	0.281
latino	0.007	0.081
gingrich_senator	0.000	0.000
maj	0.631	0.483
party_free_ideal_point	−0.791	0.520
pirate100	82.572	12.211
pfrate100	84.130	10.074
ideological_extremism	0.791	0.520

Table 1: Senate Data emIRT Only, Democrat Summary Stats

Statistic	Mean	St. Dev.
class	2.051	0.787
pres_vote_share	0.562	0.085
votepct	59.002	9.121
south	0.275	0.447
south11	0.225	0.418
south13	0.282	0.450
south17	0.335	0.472
leader	0.115	0.319
chair	0.139	0.346
best_committee	3.710	2.620
power_committee	0.717	0.451
up_for_reelection	0.328	0.470
freshman	0.389	0.488
superfreshman	0.014	0.120
seniority	4.605	4.172
retiree	0.058	0.234
afam	0.003	0.056
female	0.051	0.220
latino	0.007	0.085
gingrich_senator	0.198	0.398
maj	0.474	0.500
party_free_ideal_point	0.870	0.588
pirate100	83.302	12.551
pfrate100	81.904	10.166
ideological_extremism	0.865	0.595

Table 2: Senate Data emIRT Only, Republican Summary Stats

	Democrats	Republicans	Majority	Minority
(Intercept)	6.886*	4.288	0.295	1.220
	(3.311)	(3.128)	(3.336)	(3.399)
ideological_extremism	−4.014***	2.569***	−1.481*	1.368*
	(0.688)	(0.534)	(0.657)	(0.579)
pfrate100	0.836***	0.905***	0.887***	0.889***
	(0.034)	(0.030)	(0.034)	(0.033)
pres_vote_share	29.705***	−4.299	15.311***	17.827***
	(2.850)	(3.122)	(2.549)	(2.998)
south	−3.471***	0.227	0.516	−1.484*
	(0.633)	(0.584)	(0.549)	(0.606)
votepct	−0.055*	0.046	0.015	−0.032
	(0.027)	(0.030)	(0.028)	(0.029)
female	−0.470	1.381	−0.301	2.374*
	(0.853)	(1.117)	(0.952)	(1.057)
afam	4.041	−7.168	1.147	−1.698
	(2.982)	(4.328)	(4.339)	(3.095)
latino	−1.028	−5.643*	−1.741	−2.381
	(2.738)	(2.807)	(2.502)	(3.383)
up_for_reelection	−0.762	−0.028	0.054	−1.335*
	(0.499)	(0.555)	(0.521)	(0.594)
seniority	0.018	0.139	0.118	0.093
	(0.071)	(0.085)	(0.087)	(0.077)
freshman	−0.505	0.539	0.899	0.504
	(0.676)	(0.785)	(0.722)	(0.787)
retiree	1.857	−0.552	1.405	0.947
	(1.023)	(1.087)	(1.148)	(1.070)
best_committee	−0.181	0.182	−0.049	−0.046
	(0.150)	(0.166)	(0.156)	(0.177)
leader	−0.911	0.149	0.231	−0.466
	(0.843)	(0.789)	(0.843)	(0.871)
power_committee	−0.331	1.399	0.466	0.223
	(0.905)	(0.937)	(0.915)	(1.031)
chair	−1.889**	−1.953**	−1.894**	−8.374
	(0.678)	(0.741)	(0.674)	(7.548)
R^2	0.630	0.666	0.587	0.662
Adj. R^2	0.624	0.660	0.581	0.656
Num. obs.	1037	948	1047	839
RMSE	7.151	7.321	7.413	7.451

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 3: Senate Models, emIRT Only

	Democrats	Republicans	Majority	Minority
(Intercept)	8.767*	2.422	3.813	9.210**
	(3.476)	(2.820)	(3.340)	(3.187)
ideological_extremism	−2.949***	2.337***	−0.538	2.181***
	(0.715)	(0.507)	(0.649)	(0.574)
pfrate100	0.919***	0.908***	0.903***	0.885***
	(0.035)	(0.030)	(0.034)	(0.033)
south	−3.498***	0.283	0.242	−1.470*
	(0.665)	(0.583)	(0.556)	(0.619)
votepct	−0.000	0.037	0.047	−0.016
	(0.027)	(0.029)	(0.028)	(0.030)
female	1.317	1.482	0.201	2.646*
	(0.879)	(1.115)	(0.964)	(1.077)
afam	5.055	−6.972	1.308	−1.544
	(3.133)	(4.328)	(4.412)	(3.159)
latino	−0.752	−5.460	−1.880	−2.953
	(2.879)	(2.805)	(2.544)	(3.452)
up_for_reelection	−0.758	−0.062	0.142	−1.373*
	(0.524)	(0.555)	(0.529)	(0.606)
seniority	0.159*	0.145	0.097	0.112
	(0.073)	(0.085)	(0.088)	(0.079)
freshman	0.414	0.566	1.257	0.584
	(0.705)	(0.785)	(0.732)	(0.803)
retiree	2.549*	−0.491	1.476	1.008
	(1.073)	(1.086)	(1.168)	(1.092)
best_committee	−0.132	0.162	−0.042	−0.017
	(0.158)	(0.165)	(0.158)	(0.181)
leader	−1.604	0.111	0.453	−0.358
	(0.883)	(0.789)	(0.857)	(0.889)
power_committee	−0.299	1.355	0.547	0.129
	(0.951)	(0.936)	(0.930)	(1.052)
chair	−2.515***	−1.958**	−1.528*	−6.120
	(0.710)	(0.741)	(0.682)	(7.695)
R^2	0.591	0.665	0.573	0.648
Adj. R^2	0.585	0.660	0.567	0.641
Num. obs.	1037	948	1047	839
RMSE	7.519	7.324	7.538	7.605

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 4: Statistical models

Figure 1: Figure 2, Ideological Extremism, Senate emIRT Only