Online Appendix for:
Majority Status and Variation in Informational Organization

Linking Rohde's (2004) classifications to House committee jurisdictions

The list below shows the Rohde (2004) coding issues linked to each standing committee in the analysis.

Committee Name	Issue codings
Agriculture	910-919
Appropriations	100-299
Armed Services	300-339, 350-389
Banking, Finance, and Urban Affairs	579-599
Budget	520-539
Education	850-859, 960-969
Energy and Commerce	600-669, 690-699
Foreign Affairs	400-499
Government Operations	700-719
Judiciary	720-799
Natural Resources	670-679
Public Works and Transportation	920-929
Science, Space, and Technology	950-959, 390-399
Ways and Means	500-569

The bills were coded according to issue, not committee assignment directly. A quote from Rohde's codebook (linked below).

> This data is collected from the CQ Roll Call books listing all recorded teller votes (not including quorum calls). A few points on coding philosophy are worth mentioning. First, if a vote appeared to be viable in two or more issue categories, we attempt to determine where it falls in the larger context. For instance, a vote on abortion taken up in the

context of the Defense Appropriations bill is categorized in the relevant appropriations category (119) rather than that of abortion. This holds whenever such language relates only to the specific area in question, without rewriting the law outside of the area under consideration (i.e., defense). If the language of the bill would set abortion policy in areas extending beyond defense, the issue code would then be abortion (948). Second, a small number of issue and vote type codes have been added over the course of the dataset. However, this has been done only when new issues have been introduced into the political spectrum. We have attempted to avoid introducing new codes which cover issues coded differently in previous congresses.

An important assumption of my design is that each bill will be referred to the committee with property rights over the issue attributed to the bill by Rohde. A random check of 100 bills reveals that the issue code matched the committee assignment every time — that is, the committee matched to the issue code in my data generation was the committee that actually heard the bill. In cases where bills received multiple referrals (which are quite frequent) the match was overwhelmingly to the first committee. Given the coding philosophy, I believe that the assumptions of my design stand on a solid foundation.

Rohde's data set and codebook can be found here:
https://www.msu.edu/ pipc/pipcdata.htm?menu1=PIPC+Members

Table 1: *This table shows the results from the exercise evaluating probability that a median identified by all roll call votes will be the same median identified by the set of jurisdiction-specific votes. In the case of all four individuals of interest, the mean probability of a match was less than 0.01. For comparison, I have also listed the probability that selecting a member at random will identify the jurisdiction-specific median from a given group. All votes do slightly better than chance for floor medians (by eliminating the most extreme representatives) but substantially worse than chance for committee medians.*

	Floor Median			Committee Median		
	Mean	Median	SD	Mean	Median	SD
Majority	0.008	0.007	0.005	0.001	0.000	0.004
Minority	0.009	0.009	0.005	0.002	0.000	0.041
	Probability of a match by random selection					
Majority	0.004	0.004	0.001	0.043	0.031	0.012
Minority	0.006	0.006	0.001	0.067	0.063	0.021

Table 2: *This table replicates Groseclose's (1994) secondary analysis for his first hypothesis test on the* 99^{th} *House (that committees are composed of preference outliers). This analysis calculates the probability that the number of outliers recovered is the product of chance via Monte Carlo simulation. According to Groseclose's test, for each criterion, the probability that the number of outliers recovered with the new data I have generated here is the product of chance is effectively zero.*

Criterion	Expected Outliers	Actual Outliers	Significance
0.010	0.070	4	0.000
0.050	0.350	4	0.000
0.100	0.700	4	0.003

Table 3: Descriptive Statistics for Numerical Covariates in Hierarchical Regression of Individual Error Rates

Covariate	Mean	SD
Error Rate	0.206	(0.131)
Majority	0.582	(0.493)
Representativeness	0.368	(0.361)
Committee Member	0.097	(0.295)
Committee Staff	0.076	(0.030)
Majority Committee Seat Share	0.607	(0.055)
Rank Order Distance from Median	108.81	(62.832)
Data Dimensionality	0.340	(0.111)
Majority Strength	0.585	(0.052)

Table 4: Outlier Probabilities for Minority Contingents. Smaller values indicate extreme contingents, larger numbers indicate moderate contingents

	Jurisdiction													
Congress	Agr	App	Arm	Ban	Bud	Edu	Ene	For	Gov	Jud	Nat	Pub	Sci	Way
84	–	–	–	–	–	–	–	–	0.000	–	–	–	–	–
85	–	0.968	–	–	–	–	0.968	–	–	–	–	–	–	0.012
86	–	0.834	–	–	–	–	–	–	–	–	–	–	–	–
87	–	0.038	–	–	–	–	–	0.992	0.000	–	–	–	–	0.320
88	–	0.786	–	–	–	–	–	–	–	–	–	–	–	0.884
89	–	0.000	–	–	–	0.477	–	–	0.757	0.839	–	–	–	0.301
90	–	0.798	–	–	–	0.000	0.001	0.000	0.000	0.877	–	–	–	0.428
91	–	0.189	0.009	–	–	0.395	–	0.000	0.038	0.324	–	–	–	0.725
92	0.799	0.000	0.417	–	–	0.002	0.000	0.515	0.000	0.000	–	–	–	0.461
93	0.000	0.000	0.000	0.000	–	0.552	0.000	0.000	0.000	0.038	–	0.249	0.489	0.000
94	0.000	0.000	0.365	0.147	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.044	0.336	0.000
95	0.000	0.000	0.096	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.168	–	0.000
96	0.163	0.000	0.150	0.000	0.000	0.000	0.000	0.000	0.758	0.919	0.007	0.271	–	0.000
97	0.000	0.000	0.000	0.180	0.000	–	0.000	0.000	0.000	–	–	–	0.350	0.735
98	0.000	0.000	0.000	–	0.303	0.947	0.000	0.000	–	0.000	0.000	–	–	0.000
99	0.000	0.000	0.000	–	0.000	0.843	0.000	0.754	–	0.000	–	–	–	0.000
100	–	0.000	0.000	–	0.000	0.447	0.000	0.000	–	0.000	–	–	0.889	0.000
101	0.000	0.000	0.000	0.257	0.090	0.000	0.000	0.000	–	0.013	0.000	–	–	0.087
102	–	0.000	0.000	0.000	0.193	0.000	0.000	0.000	–	0.075	–	–	–	0.000
103	–	0.000	0.000	–	0.000	0.000	0.000	0.000	0.000	0.000	0.768	–	–	0.000
104	–	0.000	0.000	0.380	0.000	–	0.000	0.000	0.426	0.196	0.000	–	–	0.000
105	–	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.537	0.226	–	0.000
106	–	0.000	0.000	0.000	0.547	0.000	0.000	0.000	0.334	0.000	0.000	–	–	0.000
107	–	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	–	0.485	–	0.000
108	–	0.000	0.017	0.932	0.000	0.000	0.000	0.000	–	0.000	–	0.896	–	0.000

Table 5: Outlier Probabilities for Majority Contingents. Smaller values indicate extreme contingents, larger numbers indicate moderate contingents

	Jurisdiction													
Congress	Agr	App	Arm	Ban	Bud	Edu	Ene	For	Gov	Jud	Nat	Pub	Sci	Way
84	–	–	–	–	–	–	–	–	0.403	–	–	–	–	–
85	–	0.893	–	–	–	–	0.142	–	–	–	–	–	–	0.288
86	–	0.919	–	–	–	–	–	–	–	–	–	–	–	–
87	–	0.394	–	–	–	–	–	0.668	0.998	–	–	–	–	0.832
88	–	0.791	–	–	–	–	–	–	–	–	–	–	–	0.947
89	–	0.631	–	–	–	0.601	–	–	0.838	0.063	–	–	–	0.502
90	–	0.101	–	–	–	0.866	0.908	0.753	0.414	0.733	–	–	–	0.027
91	–	0.639	0.103	–	–	0.718	–	0.871	0.877	0.912	–	–	–	0.437
92	0.778	0.026	0.664	–	–	0.986	0.737	0.094	0.940	1.000	–	–	–	0.833
93	0.021	0.004	0.019	0.643	–	0.502	0.850	0.719	0.755	0.258	–	0.236	0.599	0.235
94	0.018	0.006	0.212	0.450	0.199	0.967	0.639	0.878	0.956	0.998	0.331	0.922	0.525	0.661
95	0.012	0.099	0.227	0.402	0.354	0.917	0.729	0.992	0.981	0.211	0.985	0.540	–	0.541
96	0.078	0.329	0.675	0.709	0.896	0.927	0.812	0.951	0.623	0.290	0.158	0.176	–	0.562
97	0.046	0.347	0.000	0.603	0.637	–	0.774	0.866	0.733	–	–	–	0.186	0.511
98	0.011	0.604	0.000	–	0.581	0.251	0.682	0.954	–	0.986	0.754	–	–	0.570
99	0.120	0.748	0.000	–	0.791	0.892	0.608	0.238	–	0.590	–	–	–	0.549
100	–	0.868	0.000	–	0.832	0.623	0.395	0.873	–	0.903	–	–	0.439	0.864
101	0.126	0.732	0.001	0.436	0.032	0.581	0.381	0.998	–	0.868	0.507	–	–	0.245
102	–	0.986	0.004	0.350	0.187	0.365	0.816	0.982	–	0.400	–	–	–	0.353
103	–	0.854	0.000	–	0.802	0.993	0.629	0.746	0.928	0.781	0.484	–	–	0.708
104	–	0.100	0.811	0.454	0.503	–	0.275	0.581	0.818	0.525	0.305	–	–	0.398
105	–	0.083	0.915	0.032	0.965	0.949	0.999	0.126	0.204	0.899	0.302	0.000	–	0.058
106	–	0.438	0.051	0.937	0.197	0.231	0.456	0.072	0.658	0.865	0.234	–	–	0.155
107	–	0.050	0.996	0.003	0.050	0.192	0.524	0.926	0.184	0.980	–	0.422	–	0.799
108	–	0.060	0.826	0.353	0.008	0.261	0.547	0.670	–	0.883	–	0.767	–	0.075

Table 6: *Illustration of a roll call error adapted from Poole (2005). Where the rank ordering of preferences amongst the legislators is $A < B < C < D$, roll calls 1-5 illustrate perfect voting classification. Roll call 6 is an example of a voting error where legislator C violates the expected rank ordering.*

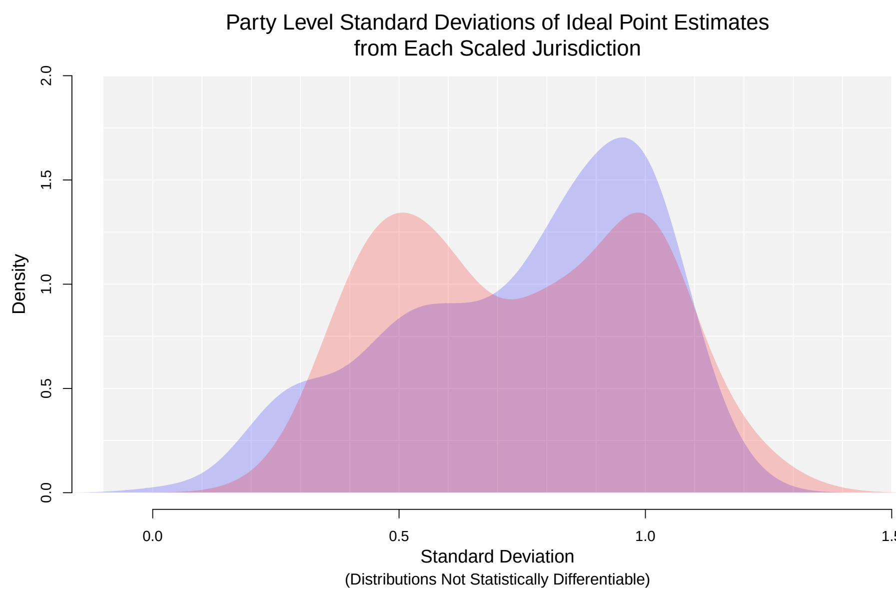
	Roll Calls					
Legislators	1	2	3	4	5	6
A	Y	Y	Y	Y	N	Y
B	Y	Y	Y	N	N	N
C	Y	Y	N	N	N	***Y***
D	Y	N	N	N	N	N

Substantively, we could conceptualize roll call classification errors as representing a temporary disruption to the typical voting coalitions that we would expect given a particular policy. Consider Table 6, adapted from Poole (2005). Here, where the "true" rank ordering of the legislators is $A < B < C < D$, roll calls 1 through 5 demonstrate perfect voting. Roll call 6, however breaks the rank ordering and would result in an error for the scaling model. The natural response of most probabilistic voting models (like W-NOMINATE), is to rearrange the legislators in the voting space to correct such disruptions. Thus, classification errors are only realized in instances where the voting coalition that is broken is so consistent that rearranging it to correct the break would reduce the overall model fit for all legislators or if there is no alternate rank ordering that can be establish to correct the error.

Discpline

An anonymous reviewer brought up the idea that the difference between majority and minority error rates may not be a function of committee informativeness, but potentially a function of voting discipline. To examine the aggregate voting discipline of the two parties, I have plotted the distribution of standard deviations of ideal point estimates for each scaled jurisdiction for both parties. If the majority was substantially more disciplined on all votes (we know from previous research that they are more disciplined on *organizational* votes) than we would observe less variation in voting behaviors, thus smaller standard deviations in the ideal point estimates of the majority party. This is not the case.

Figure 1: *Distribution of party level standard deviations from ideal point estimates*



Modeling the Error in the Data

In the text I note that two of the covariates in the main model are data with measurement error. The committee staff values are imputed where missing and the individual legislator rank orderings are a function of the ideal point estimates, which are values with measurable error.

In order to model this error, so that we can be reasonably certain that it is not biasing our inferences, I use a simple, but computationally taxing, bootstrap. For each value, each committee staff proportion and each individual ideal point estimate, I specify a normal distribution (I simply use the mean and standard deviation of the existing committee staff data and the ideal point and bootstrap standard error, respectively) and draw new a value for each observation. I then reestimate the hierarchical regression. Using the parameter estimates and variance-covariance matrix of the likelihood estimate, I specify a multivariate normal distribution from which I can draw simulated parameter estimates. I draw 100 parameters for each iteration and execute 1,000 iterations. The resulting distribution of parameter estimates allows me to account for error in the model estimation and the underlying data when interpreting the substantive effects. Below, I have plotted the distribution of simulated parameter estimates from this exercise. This will be useful for those who may be interested in variation in voting error across jurisdictions or congressional sessions. For example, despite what we may expect from anecdotal accounts of the change from Democratic to Republican majority, the baseline voting error at the session level changed very little from the 103^{rd} to the 104^{th} Congress. There is also interesting variation at the jurisdiction level. As we may expect, representatives are least likely to err on Appropriations and Ways and Means voting, but most likely to err on Science and Public Works legislation.

Figure 2: *Distributions of fixed parameter estimates from error modeling exercise.*

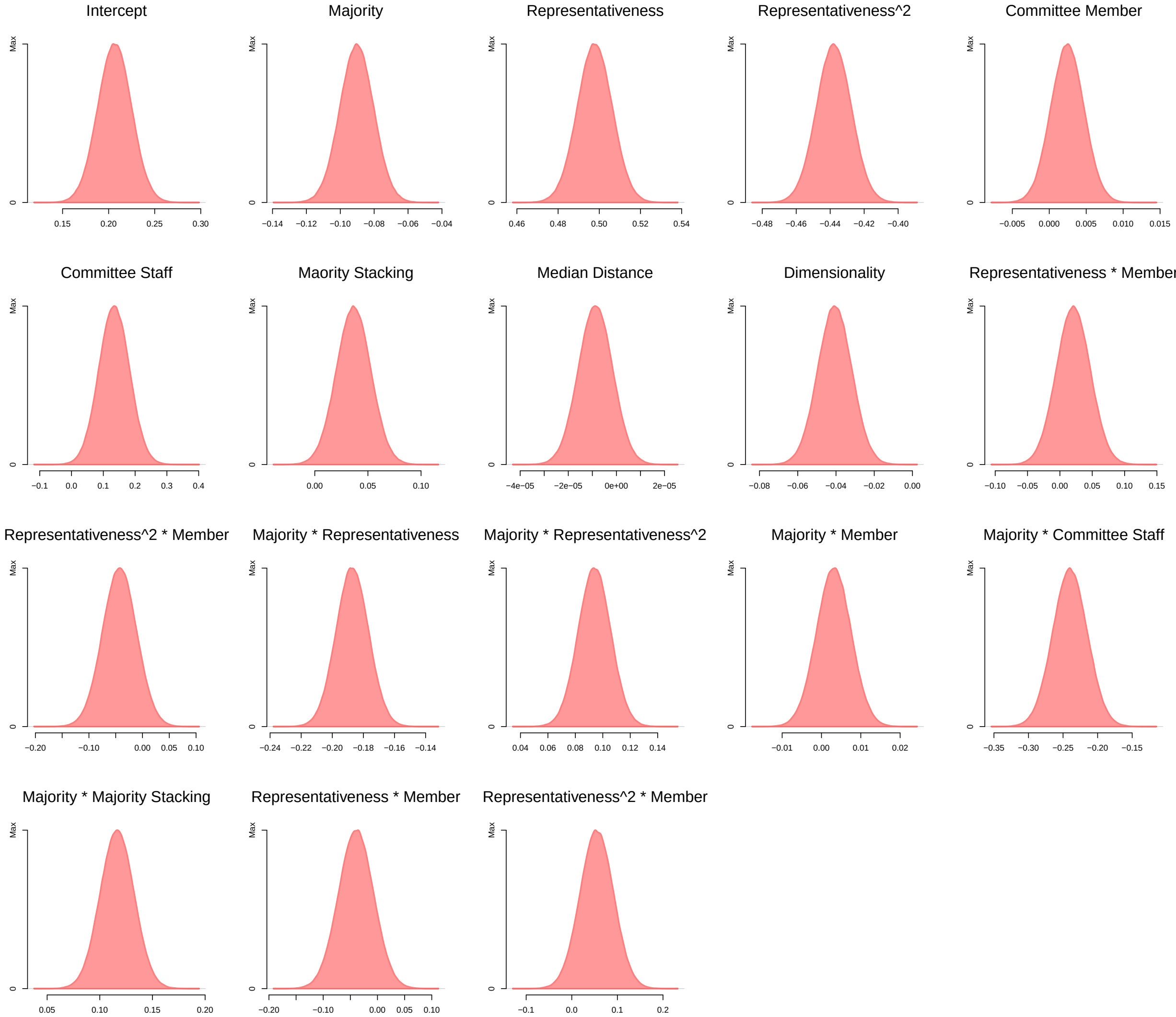


Figure 3: *Distribution of random jurisdiction level effects from error modeling exercise.*

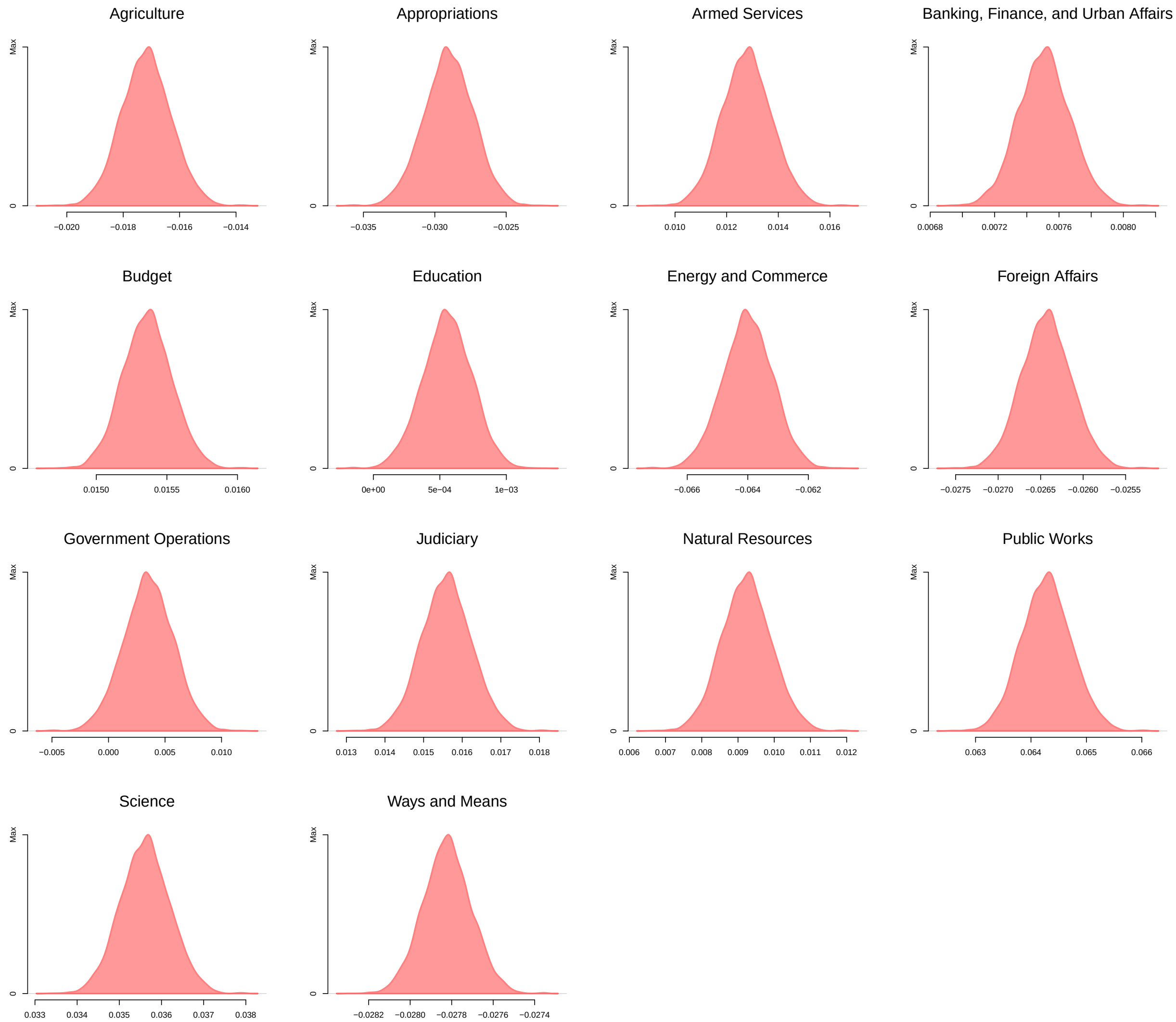


Figure 4: *Distribution of random session level effects from error modeling exercise.*

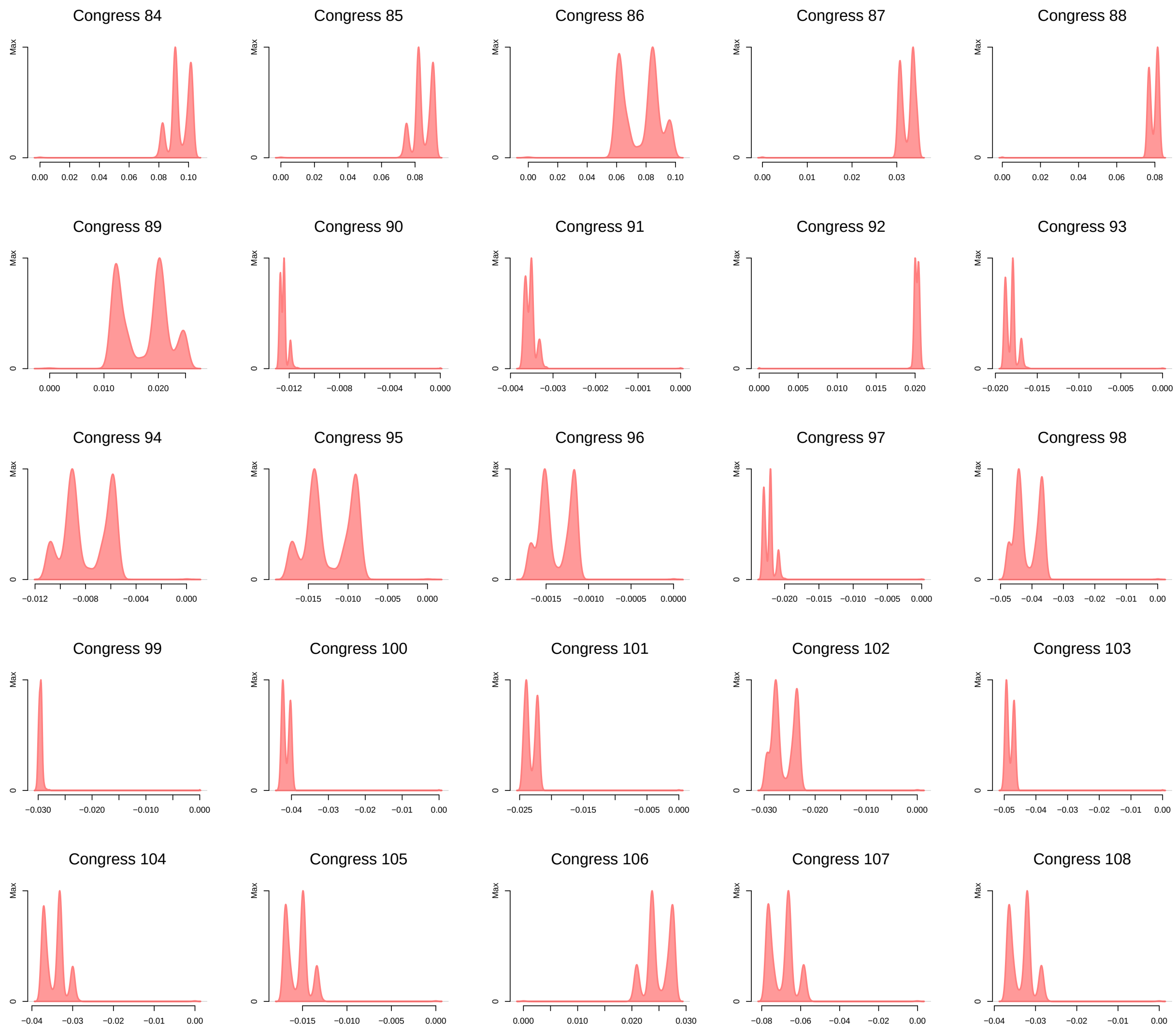


Figure 5: *Distribution of random session level house majority seat share effects from error modeling exercise.*

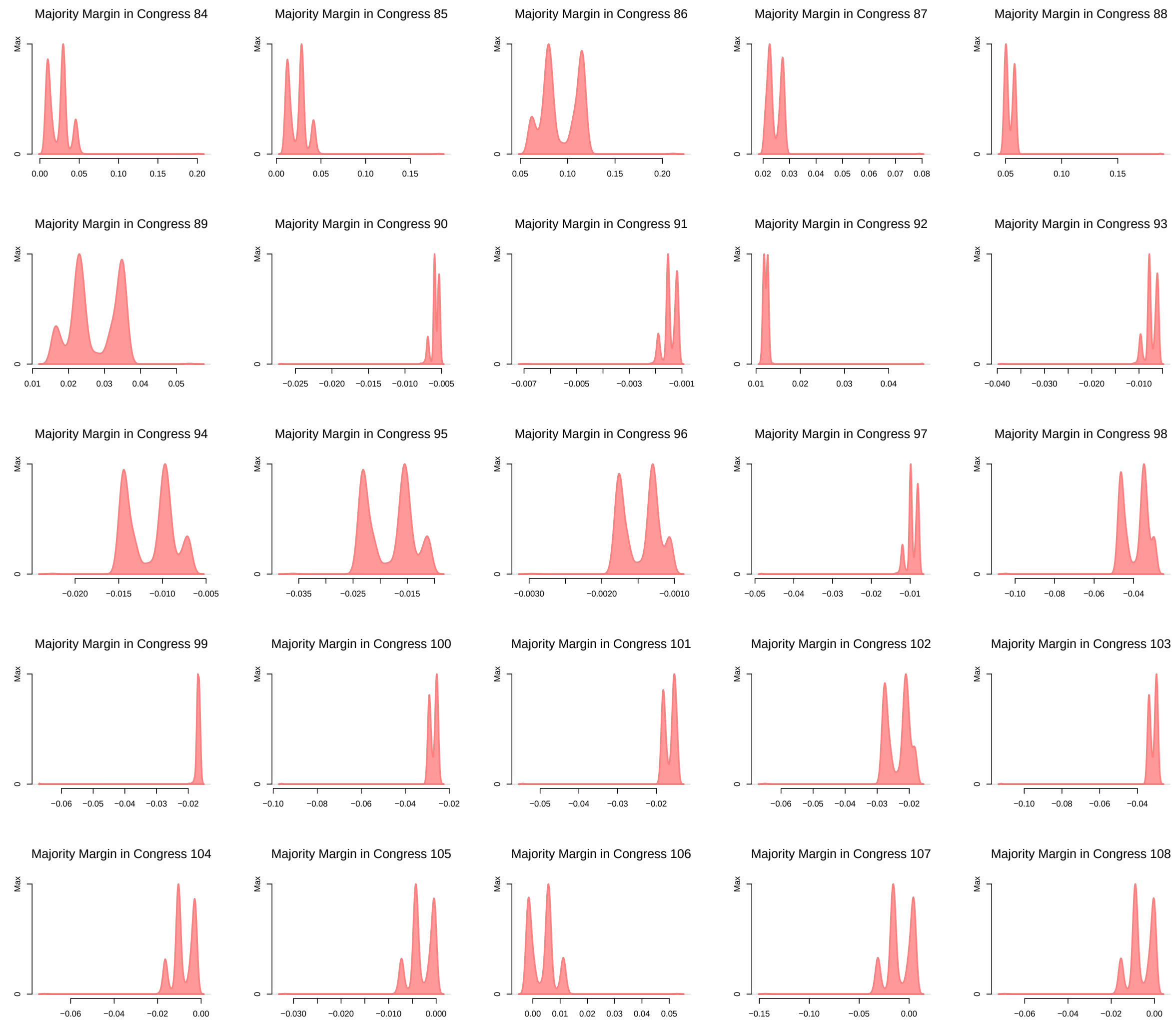
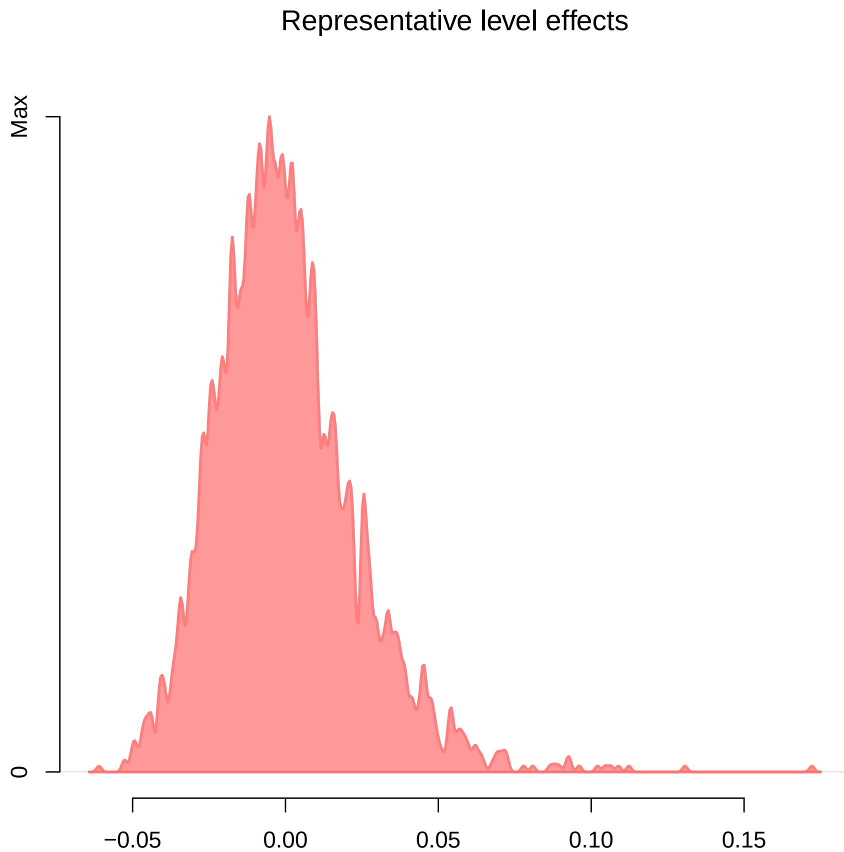


Figure 6: *Distribution of representative level effects from error modeling exercise.*



A different look at committee composition

Below I have created heat maps of outlier probabilities where bright blue areas indicate extreme outliers, bright red areas indicate moderate outliers and purple areas indicate committee contingents that are representative of their party.

Figure 7: *Heat mapping of majority committee compositions for all scaled jurisdictions.*

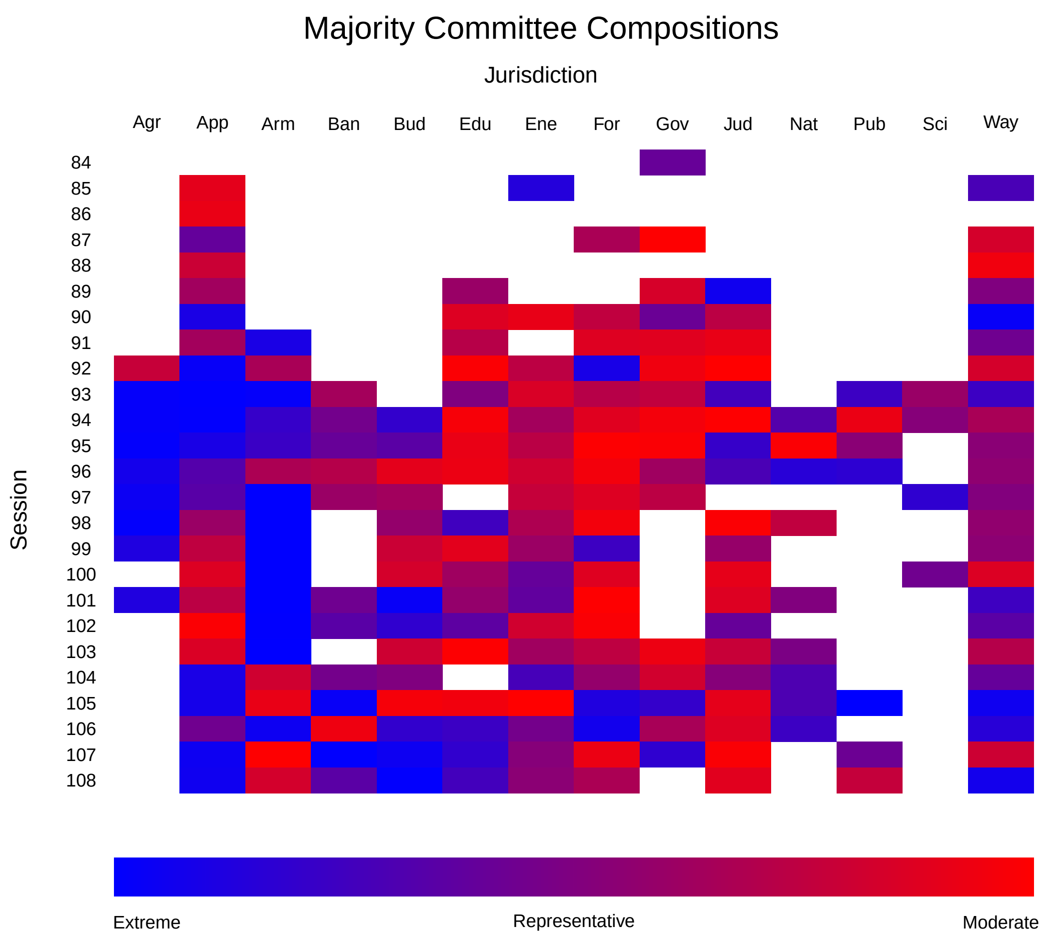


Figure 8: *Heat mapping of minority committee compositions for all scaled jurisdictions.*