

## **Locating U.S. Solicitors General in the Supreme Court's Policy Space**

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## **Locating U.S. Solicitors General in the Supreme Court's Policy Space**

The U.S. Solicitor General (SG) is widely viewed as a particularly consequential legal and political actor and is the most direct link between the executive branch and the Court. Spatial approaches to understanding the involvement and influence of the SG at the Supreme Court make it necessary to locate the SG in the same policy space as the justices. We treat the SG's positions advocated in her *amicus curiae* briefs as equivalent to votes in these cases and employ an item response model that yields facially valid estimates of the location of the SGs serving during the Eisenhower through Obama administrations. Ideal points for the justices are simultaneously estimated, meaning that we provide directly comparable ideal points for the justices and "tenth justices" in the same policy space. An examination of the location of the SGs reveals that the ideological orientation of the appointing president has a strong effect. We find mixed evidence of SGs orienting themselves toward the median justice on the Court, implying that SGs might also serve a second principal in some cases.

The U.S. Solicitor General (SG) is widely viewed as a particularly consequential legal and political actor as she is believed to be both influential over the Supreme Court's decisions and the most direct link between the executive branch and the Court (Black and Owens 2012). Interest in the SG is further sparked by her unique role as a "tenth justice" who serves both the president and, some argue, the justices (Caplan 1987; Pacelle 2003). Scholars thus seek to better understand the magnitude and qualifiers of Court deference to the SG and often do so, at least implicitly, through the application of spatial models of Court decision making (e.g., Black and Owens 2012). Bailey, Kamoie, and Maltzman (2005), for instance, argue that an SG will be most likely to influence a justice's approach to a case when the SG is ideologically proximate to the justice or advocates a position that is distant from the SG's ideal point.

These spatial approaches necessitate locating the SG in the same space as the justices. To do so, we develop a new measure of the SG's expressed position in the Court's policy space. We treat the SG's positions advocated in her amicus curiae briefs as equivalent to votes in these cases. Using these SG "votes" as well as the votes of the justices, we employ an item response model designed to allow for the fact that the SG can choose not to vote. This novel approach yields facially valid estimates of the location of the SGs serving during the Eisenhower through Obama administrations. The locations of the justices are simultaneously estimated, meaning that we provide comparable ideal points for the justices and "tenth justices" in the same policy space. After presenting their ideal points, we model the location of the SGs and find that the ideology of the appointing president has a strong effect on the location of an SG and that this appointment effect is approximately the same size as that for the justices. We find also find tentative evidence of SGs orienting themselves toward the median justice on the Court in the issue area of civil rights and liberties, implying that SGs might serve two principals in some cases.

## **Approaches to Measuring the Ideological Position of the Solicitor General**

Most efforts to measure the ideal point of the SG involve determining the ideological position of the president who appointed the SG and then using the president's position as a proxy for that of the SG. Some researchers use the partisanship of the president as a measure for the SG's position (Wohlfarth 2009) while others use a finer-grained measure of the president's ideal point (e.g., Common Space scores – see Black and Owens 2012; Nicholson and Collins 2008).<sup>1</sup> There are limitations, though, to using the president's partisanship or ideal point as a measure of the SG's operative ideal point in the Court's policy space. First, this approach assumes that SG's are perfect agents of the president, which is not necessarily supported by the literature (e.g., Pacelle 2003). Furthermore, this approach only allows SG ideal points to vary between appointing presidents, which glosses over possibly important differences such as the reported distinction between Rex Lee, Reagan's first, relatively moderate SG, and Charles Fried, his second, allegedly much more ideological SG (Caplan 1987). It is also not clear that there is a consensus as to how to best locate the president in the Court's policy space, which might be problematic for this approach to measuring the SG's position.

A second approach is to code a given SG's positions before the Court as liberal or conservative and then aggregate these positions (e.g., Meinhold and Shull 1998; Segal 1988).<sup>2</sup> These measures do not make the assumption that SGs perfectly represent the president's positions and allow for within-president variation in the ideological location of the SG. Modern measures of the ideal points of the justices (e.g., Martin and Quinn 2002), however, have moved

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<sup>1</sup> Bailey, Kamoie, and Maltzman (2005) estimate the president's location in the Court's policy space and then use the president's ideal point to measure an SG's ideal point.

<sup>2</sup> Wohlfarth (2009) uses a similar strategy when measuring the politicization of the SG

on from using simply percentages of, say, liberal voting, which makes these percentages for SGs incompatible and thus problematic for testing spatially-derived hypotheses that involve both the SGs and the justices.

### **An IRT Model of the SG’s Position in the Court’s Policy Space**

To measure the ideal points of SGs in the same space as the justices without assuming that SGs are perfect agents of their appointing president, we treat the positions expressed by SGs in their amicus curiae briefs as equivalent to votes in these cases. We then combine these amicus “votes” with the votes of the justices in the same cases and use an item response (IRT) model to simultaneously estimate the ideal points of the SGs and justices in the same space.

There is a potentially important difference, though, between the votes of the justices and the amicus positions of the SGs. Barring recusal, sitting justices cast votes in all the cases the Court hears while the SG can pick the cases in which to cast amicus-based votes. Treating the SG’s missing votes as missing at random (MAR) may bias estimates of the ideal points of the SGs (Rosas, Shomer, and Haptonstahl 2015). Indeed, the spatial logic underlying the IRT model of ideal point estimation implies that these missing votes are not random, as the SG is likely to abstain when, due to her ideal point, the SG is indifferent or sufficiently close to indifferent to the two possible outcomes in the case (i.e., reverse or affirm). This type of missing vote is not random as it is directly a function of the SG’s ideal point in the Court’s legal policy space.

To address this problem, we employ the IRT model developed by Rosas, Shomer, and Haptonstahl (2015), which explicitly allows for voters to abstain if the difference in utility between the two outcomes is relatively small.<sup>3</sup> Furthermore, the model includes a voter-specific

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<sup>3</sup> The main limitation of this approach is that it does not allow for dynamic ideal points, though this should not be of particular concern for the SGs as they serve fairly short terms in office.

abstention parameter which effectively allows each voter to have their own baseline probability of abstention. Abstentions are thus modeled as a function of spatial indifference and a voter specific propensity for abstention. Details regarding the IRT model, its treatment of abstention, and other estimation details can be found in the Supplemental Material.<sup>4</sup>

To assemble data on the votes, we use the Supreme Court Database to identify the orally argued Supreme Court cases from the 1953 through 2013 Court Terms and the justices' votes in these cases. The votes of the SGs are derived from their amicus filings on the merits in this same set of cases.<sup>5</sup> Amicus data were collected through an exhaustive search of Lexis, *Briefs and Records of the United States Supreme Court*, and Gale's *The Making of Modern Law: U.S. Supreme Court Records and Briefs, 1832-1978*. For each SG-filed amicus brief, we identify the explicit position taken by the brief as to whether the Court should reverse or affirm the lower court and treat these positions as equivalent to the justices' votes to reverse or affirm in the same

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<sup>4</sup> We also estimated the ideal points of the SGs and the justices with a traditional IRT model in which it is assumed that all missing votes are missing-at-random (MAR). These MAR-based ideal points are listed in Table S2 of the Supplemental Material. While for the reasons articulated above we prefer the Rosas, Shomer, and Haptonstahl (2015) IRT model that does not make the MAR assumption, the MAR-based ideal points for the SGs are not that different and the two sets of estimates correlate very highly ( $r = .966$ ). Table S6 of the Supplemental Information replicates the core results of Tables 1 and 2 while using the MAR-based ideal points and the inferences remain the same.

<sup>5</sup> The Court occasionally invites the SG to file an amicus brief and these invited briefs cannot be considered discretionary in the same sense that typical amicus filings are. But, these invitations to file are at the certiorari (i.e., case selection) stage of the Court's decision-making process, not the merits stage, and thus should not pose an issue for us as we do not include amicus briefs filed on cert.

case.<sup>6</sup> The SG's vote is coded as an abstention for every time the SG did not file an amicus brief.<sup>7</sup>

Figure 1 depicts the estimated ideal points for the 17 SGs who served during the 1953 through 2013 Court Terms.<sup>8</sup> To provide useful reference points, the ideal points of eight of the 33 justices who served during this time span and thus are included in our estimation are also presented. Following Martin and Quinn's (2002) lead, our estimation incorporates informative priors for a handful of the justices that orient the resulting ideal point estimates so that lower values are associated with liberal positions and larger values indicate those that are more conservative.

\*\*\* Figure 1 Here \*\*\*

There are several interesting features of these ideal point estimates. To begin, there is significant variation in the location of the SGs in the Supreme Court's policy space. Eight of the SGs are located to the left of Justice Ginsburg and five are to the right of Justice O'Connor. While there may be a surprise or two, most of the ideal points align with conventional wisdom. For example, Charles Fried (located near Justice Rehnquist) is to the right of Rex Lee (located near Justice Powell). This comports with Caplan's (1987) account of Lee's moderation and

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<sup>6</sup> The average number of amicus-based votes is 72.9 for the 17 SGs and 12.7 for the seven acting SGs. The inclusion of acting SGs is not particularly consequential for the estimates in the regression models we later present. For example, if the acting SGs are excluded from the analyses in Tables 1 and 2 the inferences remain the same (see Table S5 in the Supplemental Material). We exclude SG amicus briefs that do not expressly advocate for a clear, directional outcome (e.g. reverse in part and affirm in part or briefs not in favor of either party).

<sup>7</sup> For cases in which the SG is a party we treat the SG's vote as missing, not an abstention.

<sup>8</sup> The Supplemental Material lists all the ideal points (Table S1) and compares these ideal points with previous measures (Table S3).

Fried's more controversially ideological approach to the office and also illustrates the usefulness of a measurement strategy that allows SG ideal points to vary for a given appointing president. Also of note is the existence of two SGs who subsequently were appointed to the Court; and it is interesting to see that SG Kagan is located at virtually the same position as Justice Kagan while SG Marshall was much more moderate than Justice Marshall.

Figure 2 provides the mean and range of ideal points for the SGs appointed by each of the presidents. Here we include information on all the SG ideal points, including those for SGs who were acting and not fully appointed. There are two takeaways from this data visualization. First, the mean locations of the SGs appointed by Democratic presidents are all more liberal than the mean ideal points of the SGs appointed by Republicans. Second, there is significant variation in the range of ideal points of the SGs within some of the presidents, though one should be very careful reading much into this given the very small sample sizes.

\*\*\* Figure 2 Here \*\*\*

### **The Positioning of the Solicitor General**

Our ideal point estimates reveal where an SG locates herself in the Court's policy space. What explains this location? The literature suggests that there are three possible influences on the positioning of an SG. First, there is near unanimous agreement that the SG, as an agent and representative of the executive branch, ought to advocate on behalf of the president's policy objectives (e.g., Bailey, Kamoie, and Maltzman 2005; Meinhold and Shull 1998; Segal 1988). Whether this is due to the selection of an SG that shares the president's preferences or there are incentives and expectations for her to pursue the president's agenda is not clear. Regardless, the literature points towards the hypothesis that an SG's expressed position at the Court will be a function of presidential policy preferences. We use the appointing president's Common Space

score (Poole 1998) as a measure of his ideal point (*Appointing President*). As with our ideal point estimates, the Common Space scores for presidents increase with conservatism.<sup>9</sup>

Most scholars also suggest that the SG serves a second principal – the Supreme Court (e.g., Caplan 1987; Pacelle 2003). The Court extends tangible privileges and possibly deference to the SG with the expectation that the SG not fully pursue a highly political, presidentially-driven agenda before the Court. There is qualitative (Caplan 1987) and quantitative (Wohlfarth 2009) evidence that the SG can expect less in the way of privileges and deference if she fails to recognize the Court as her principal. Thus, a second hypothesis is that the location of the Court will exert a positive effect on the location of the SG. To measure *Supreme Court*, we use our ideal point estimates for the justices to determine the location of the median justice for each Court term. We then take the average of these medians for the terms in which an SG serves and expect that as this average becomes more conservative SGs will adopt more conservative positions.<sup>10</sup>

Pacelle (2003) contends that the SG may also view Congress as a third principal, as Congress can exert oversight of the SG through committee hearings. Furthermore, the SG may desire to avoid having members of Congress file their own amicus briefs, which could muddy the waters as to the position of the government. One way for the SG to prevent congressional briefs

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<sup>9</sup> See the Supplemental Material for a scatterplot of SG and presidential ideal points (Figure S1).

<sup>10</sup> We think it is less likely that the location of a specific SG will move the location of the median justice (i.e., reverse causation), since the estimates for the justices' ideal points are static and thus, if anything, would be responsive to the entire set of SGs that any given justice encounters over her (typically long) tenure on the Court, not any one particular SG. The estimates for the justices are also informed by votes in the many cases in which the SG is not expressing any position.

is to consider Congress' position when advocating before the Court (Pacelle 2003). To test this hypothesis, we measure the location of *Congress* as the midpoint between the two chamber medians (in Common Space) and take the average of this midpoint for the SG's time in office. If Congress is a third principal, then the SG's position should increase in conservatism as Congress moves rightward.

We test these three hypothesized influences on how SGs position themselves in the Court's policy space by estimating a series of regression models in which the SG's ideal point is the dependent variable. *Appointing President*, *Supreme Court*, and *Congress* are the three independent variables, included separately in the first three models and then jointly in the fourth.<sup>11</sup> Table 1 presents these results.

\*\*\* Table 1 Here \*\*\*

The coefficient estimates for *Appointing President* are positive and statistically significant, revealing that the ideological position of the president is associated with the positioning of the SG at the Court. Whether it is because the president is good at selecting a like-minded SG or because the SG is responsive to the preferences of the president, the relationship between the ideological orientation of the president and the location of the SG in the Court's policy space implies that the SG is an agent of the president.<sup>12</sup>

The estimates for *Supreme Court* are in the correct direction but is not significantly distinguishable from zero. There are issues with statistical power here, to be sure, as the number of modern SGs is fairly small (N = 24). But at a minimum it seems fairly safe to conclude that

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<sup>11</sup> We include the bivariate specifications due to the small sample sizes and the possibility of multicollinearity.

<sup>12</sup> It should be noted that the SG's amicus-based position might be more discretionary, and thus more a function of presidential preferences, than the SG's decisions as a litigant.

the ideological orientation of the Supreme Court is not as influential on the SG as is the orientation of the president, at least when we estimate SG ideal points using all the Court's cases across all issue areas. The estimates for *Congress* are not consistent with Pacelle's (2003) suggestion that Congress might influence the SG.

It is also expected that justices have ideal points that reflect the preferences of their appointing presidents. To compare the two appointment effects, the Table 2 presents an analysis in which the ideal points of both SGs and justices are included in the dependent variable.<sup>13</sup> We include *SG* (equals one if the actor is an SG and zero if it is a justice) and its interaction with *Appointing President* and *Congress*. This allows us to estimate differences between the effects of these two independent variables on the two types of actors.

\*\*\* Table 2 Here \*\*\*

The estimate for *Appointing President* is positive and significant, meaning that the ideal points of the justices are, not surprisingly, a function of the ideological location of the presidents who appointed them. The estimate for  $SG \times \textit{Appointing President}$  is negative but not significant, which implies that there is no statistically discernible difference in the ideological connection between a president and his SGs and a president and his justices. This is an interesting result, as an SG is commonly viewed as being an agent of the president while justices are not viewed in the same manner. It is also interesting to note that the results suggest that justices might be associated with the preferences of Congress while the SG is clearly not.

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<sup>13</sup> *Supreme Court* is not included as an independent variable in this model, as it is partly a function of the dependent variable here.

## Issue-Specific Estimates

The ideal point estimates discussed thus far are generated with all the “votes” cast by justices and SGs in all the Court’s cases. And, as is true with the Martin and Quinn (2002) scores, our ideal point estimates are generated by an IRT model that assumes a unidimensional policy space. It may be useful, though, to consider how the SGs position themselves in issue-specific subsets of Court cases. We therefore use the Rosas, Shomer, and Haptonstahl (2015) IRT model with two subsets of votes: 1) votes in all civil rights and liberties cases and 2) votes in all economics cases (Tables S7 and S8 of the Supplemental Information present these ideal points).<sup>14</sup>

Because the smaller number of cases used here means a smaller number of amicus-based votes for the SGs, only 16 SGs meet our 10-vote threshold for the civil rights and liberties cases and even fewer (12) meet this threshold for economics cases. We thus encourage caution when considering a comparison of these estimates with the all-issue areas ideal point estimates discussed above. That said, the estimated SG ideal points in the Court’s civil rights and liberties space correlate quite highly with their overall ideal point estimates ( $r = .914$ ) while the SG ideal points in economics is only modestly correlated with the overall ideal points ( $r = .381$ ). This would seem to imply that the SG’s positioning in economics cases is somewhat distinct from positioning in other, perhaps more ideological, issue areas. Table 3 presents our model of the location of the SGs for these two issue-specific sets of ideal point estimates.<sup>15</sup>

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<sup>14</sup> We consider civil rights and liberties cases to be all cases coded as being in Issue Area 1, 2, 3, 4, or 5 in the Supreme Court Database. Economics cases are those coded as being in Issue Area 7 or 8.

<sup>15</sup> For our measure of the location of the Supreme Court, we use mean location of the median justice in the issue area in question during the SG’s tenure. Thus the location of the Court and the SG is still in the same policy space.

\*\*\* Table 3 Here \*\*\*

As with the all-issue SG ideal points, SG ideal points in the domain of civil rights and liberties are associated with the ideal point of the appointing president. Interestingly, however, the estimate for *Supreme Court* is also positive and significant in this model. This tentative result implies that the Court acts as a second principal in this issue area. Neither the location of the president nor the Court predict the expressed ideal point of SGs in the domain of economics cases, though. Whose interests are represented by the SG in this subset of cases? It is unclear, though again we should emphasize the very limited number of observations that form the basis of this analysis.

### **Conclusion**

Martin and Quinn (2002) greatly advanced the study of judicial politics by applying the IRT approach to the votes of the justices and thus estimating their ideal points. We further this innovation by adding the “tenth justice” and her amicus “votes.” Our approach provides important advantages over existing measures. First, we are able to place SGs in the same policy space as the justices, allowing scholars to test spatially-derived hypotheses without relying on the President’s ideal point and thus incorrectly assuming SGs are a perfect agent of their appointing President. Further, our approach of treating missing votes as abstentions, rather than missing at random, allows us to produce unbiased estimates by accounting for the important distinction between justices, who are required to vote in nearly all cases, and SGs who can choose not to file. Our ideal point estimates for SGs and justices have a good deal of face validity as they comport with expectations (e.g., Democratic SGs and Republican SGs differ in predictable ways). Consistent with existing theory and qualitative accounts, we show that SGs are agents of the president at the Court. But, there can be interesting variation between the SGs who serve a

given president (e.g., Rex Lee and Charles Fried). There is also evidence that SGs may be responsive to the ideological nature of the justices with whom they interact, but only in the area of civil rights and liberties and any inferences made here are subject to the caveat that the sample size is very small.

Scholars of judicial politics have long studied the SG both because she represents a fundamental linkage between the executive branch and the Court and because she is a highly effective advocate. Whether ideological distance between the SG and a justice is the primary explanatory variable (Bailey, Kamoie, and Maltzman 2005; Nicholson and Collins 2008), important control (Black and Owens 2012), or potential confound, an improvement in the measure of the positioning of the SG vis-à-vis the justices should allow scholars to better test the various theories of SG involvement and influence at the Court and thus further illuminate this unique relationship. For example, the SG has been shown to influence factors such as agenda setting, the treatment of precedent, and opinion content (Black and Owens 2012). These ideal point estimates can help determine whether this influence wanes when an SG is ideologically distant from the Court median, the median of the majority coalition, or the opinion author; thus providing a better picture of the nature of the executive-judicial relationship.

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**Table 1. Explaining the location of solicitors general in the Court's legal policy space**

Independent Variable	Model 1.1	Model 1.2	Model 1.3	Model 1.4
Appointing President	.684* (.191)	---	---	.746* (.194)
Supreme Court	---	.221 (.311)	---	.174 (.271)
Congress	---	---	-.729 (1.09)	-1.83 (.940)
Constant	.087 (.080)	.108 (.157)	.286* (.107)	-.059 (.151)
N	24	24	24	24
F-test	12.8*	0.50	0.45	5.88*
R <sup>2</sup>	.367	.022	.020	.469

\*  $p \leq .05$  (two-tailed). Cell entries are OLS regression estimates (and standard errors).

**Table 2. Explaining the location of solicitors general and justices in the Court's legal policy space**

Independent Variable	Model 2.1
Appointing President	.978* (.194)
Supreme Court	---
Congress	5.89* (1.45)
SG	-.282 (.165)
SG × Appointing President	-.208 (.284)
SG × Congress	-7.49* (1.73)
Constant	.286* (.107)
N	57
F-test	10.7*
R <sup>2</sup>	.511

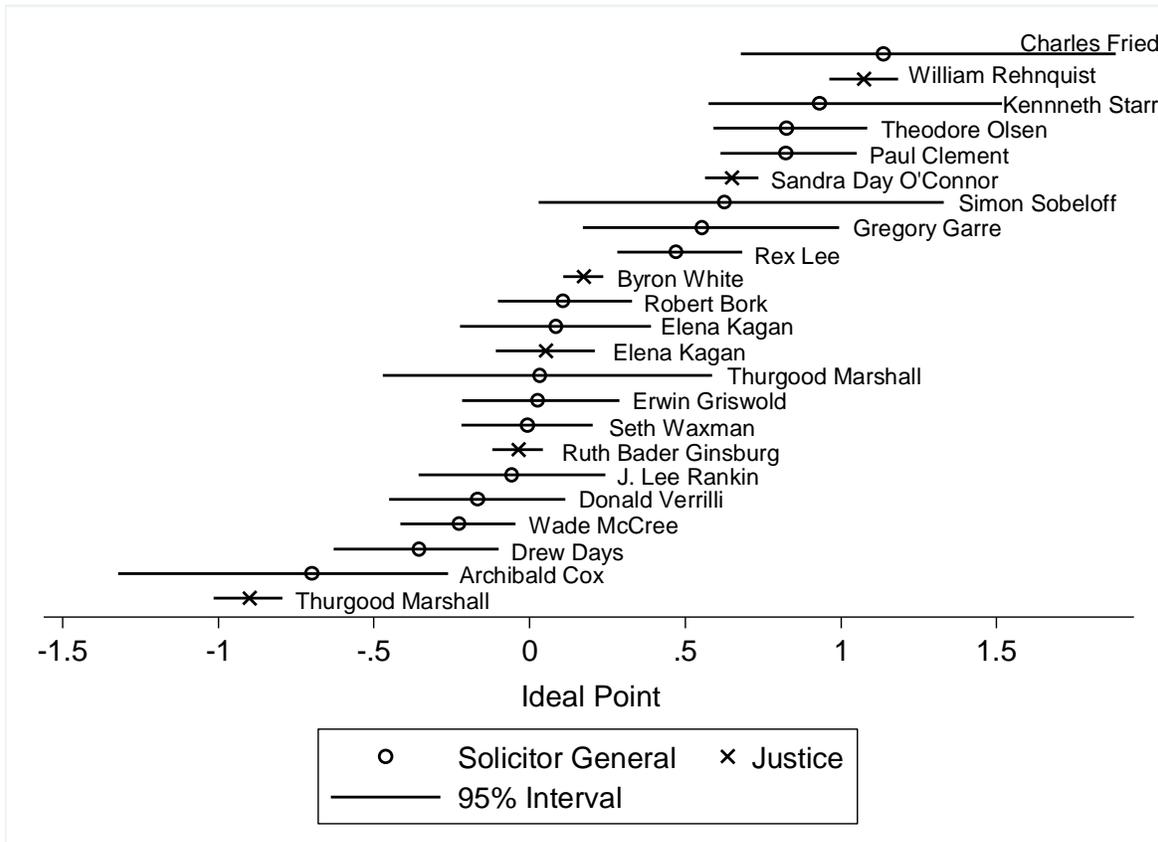
\*  $p \leq .05$  (two-tailed). Cell entries are OLS regression estimates (and standard errors).

**Table 3. Explaining the location of solicitors general in the Court’s legal policy space, by issue area**

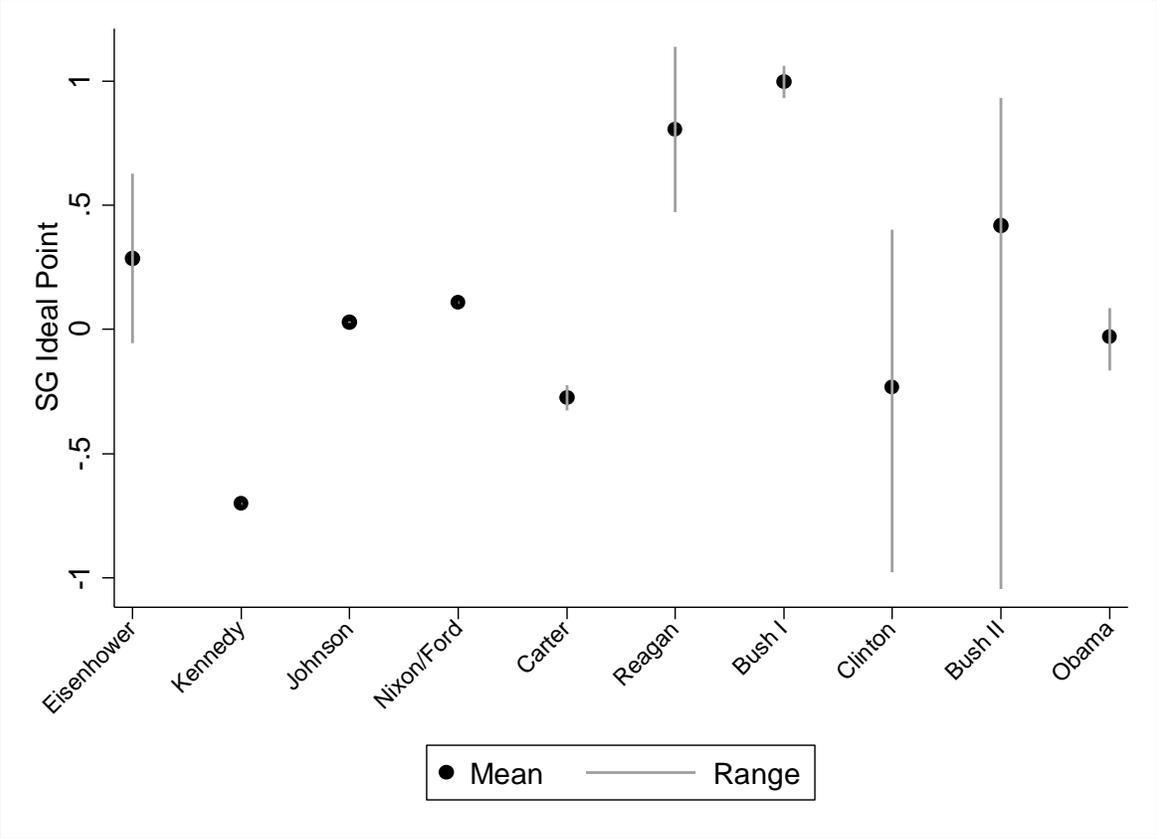
Independent Variable	Model 3.1 (Rights and Liberties)	Model 3.2 (Economics)
Appointing President	.569* (.130)	.256 (.233)
Supreme Court	.455* (.190)	.151 (.256)
Congress	.421 (.649)	.041 (1.26)
Constant	.158 (.0964)	.108 (.157)
N	16	12
F-test	13.0*	0.61
R <sup>2</sup>	.764	.185

\*  $p \leq .05$  (two-tailed). Cell entries are OLS regression estimates (and standard errors).

**Figure 1. Ideal point estimates for solicitors general and select justices, 1953 to 2013 terms**



**Figure 2. Solicitor general ideal points by appointing president**



## Locating U.S. Solicitors General in the Supreme Court's Policy Space Supplemental Material

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## IRT Model Details

The spatial logic underlying the traditional IRT model of ideal point estimation suggests that the SG's missing votes (i.e., cases in which the SG does not file an amicus curiae brief) are not random. The SG will likely not "vote" if the utility of one outcome (e.g., reversal of the lower court) is only slightly greater than that of the other (e.g., affirmance). Put differently, an SG will "abstain" if, due to the location of her ideal point she is sufficiently close to indifferent to the two possible outcomes in the case. Importantly, this type of missing vote is not random as it is a function of the SG's ideal point in the Court's legal policy space.

To address this exact type of problem, Rosas, Shomer, and Haptonstahl (2015) develop an IRT model in which a voter abstains if the difference in utility between the two outcomes (e.g., reversing or affirming the lower court) is within a range defined by  $-\gamma_i$  and  $\gamma_i$ .<sup>1</sup> This gamma parameter varies from voter to voter, meaning that some voters are quick to abstain while others will vote even if there is a very small difference between the two outcomes. Unlike the traditional IRT model, this model allows for three types of votes, which for us are vote to reverse (2), abstain (1), and vote to affirm (0):

$$v_{ij} = \begin{cases} 2 & \text{if } v_{ij}^* \geq \gamma_i \\ 1 & \text{if } \gamma_i > v_{ij}^* \geq -\gamma_i \\ 0 & \text{if } -\gamma_i > v_{ij}^* \end{cases}$$

$$v_{ij}^* = \alpha_j + \beta_j x_i + \varepsilon_{ij}$$

where  $\varepsilon_{ij}$  is normally distributed with a mean of 0 and variance of  $\sigma_j^2$ ,  $\Phi(\cdot)$  represents the standard normal distribution function,  $\alpha_j$  is a case-specific "difficulty" parameter,  $\beta_j$  is a case-

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<sup>1</sup> This specific model is developed in the Supplemental Information for Rosas, Shomer, and Haptonstahl (2015).

specific “discrimination” parameter, and  $x_i$  is the ideal point of voter  $i$  in unidimensional legal policy space.<sup>2</sup>

The probability for each of the three outcomes is then:

$$Pr(v_{ij} = 2) = \Phi\left(\alpha_j + \beta_j x_i - \frac{\gamma_i}{\sigma_j}\right)$$

$$Pr(v_{ij} = 1) = \Phi\left(\frac{\gamma_i}{\sigma_j} - (\alpha_j + \beta_j x_i)\right) - \Phi\left(-\frac{\gamma_i}{\sigma_j} - (\alpha_j + \beta_j x_i)\right)$$

$$Pr(v_{ij} = 0) = 1 - \Phi\left(\alpha_j + \beta_j x_i + \frac{\gamma_i}{\sigma_j}\right)$$

Voters with a gamma of zero (i.e., justices) will never abstain (i.e., the probability of  $v_{ij}$  equaling one is zero).<sup>3</sup>

This modified IRT model is well-suited for estimating the locations of the SGs and justices in the Court’s legal policy space. Abstentions by the SGs are not simply missing data and are instead treated as informative of their ideal points. Justices will have gammas that approach zero, meaning that they effectively cast votes in all cases. SGs can have varying non-zero gammas, allowing them to abstain at differing baseline rates independent of their ideal point.

The limitation of using this modified IRT model is that it does not allow for dynamic ideal points, which means that each actor is assumed to have a fixed ideal point. The estimation

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<sup>2</sup> We assume that the underlying policy space is unidimensional, which is consistent with spatial theories of the Supreme Court (e.g., Hammond, Bonneau, and Sheehan 2005) and existing work on ideal point estimation for justices (e.g., Clark and Lauderdale 2010; Martin and Quinn 2002). This dimension is typically portrayed in left-right ideological terms. For identification purposes,  $\sigma_1$  is set to one.

<sup>3</sup> These probabilities are taken from Rosas, Shomer, and Haptonstahl’s (2015) Supplemental Information. Note, however, that to keep the notation consistent with traditional IRT models we switch the sign for  $\alpha_j$ , which simply means that the difficulty parameters have the opposite sign in our notation than they do for Rosas, Shomer, and Haptonstahl.

of static ideal points for the justices should not be viewed as too limiting, however, since Martin and Quinn (2002) show that the static model fits the justices quite well. It should be even less of a concern for the SGs, as they serve much shorter terms than the justices, on average, and thus should not be expected to exhibit much change in their locations. On a related, practical note it is unlikely that there is a sufficient number of SG votes to allow the SG ideal points to vary, regardless of the IRT model employed.

For the sake of comparison, we also estimate the ideal points of the solicitors general and the justices with the traditional IRT ideal point model in which missing votes are simply treated as missing-at-random (MAR). Here, we are essentially using the Martin and Quinn (2002) static model while including both the votes of the justices and the amicus-based votes of the SGs. These MAR ideal point estimates are presented in Table S2. We also then use these MAR-based estimates in models of the location of these ideal points (analogous to the models 1.4 and 2.1 in the paper) and present these alternative though highly similar results in Table S6.

We estimate the IRT models with a standard Bayesian Markov chain Monte Carlo (MCMC) approach.<sup>4</sup> We use the same priors for the justices as those used by Martin and Quinn (2002, 147).<sup>5</sup> These priors orient the resulting estimates so that lower values of  $x$  correspond with more liberal ideal points and higher values correspond with those that are conservative. We use diffuse priors (i.e.,  $N(0,1.0)$ ) for the SGs since these are the actors of interest here. Thus, other than by orienting and scaling the policy dimension, the informative priors used are in no way driving the posterior estimates for the SGs.

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<sup>4</sup> We use Rosas, Shomer, and Haptonstahl's (2015) JAGS code from their Supplemental Information.

<sup>5</sup> Harlan, Douglas, Marshall, Brennan, Frankfurter, Fortas, Rehnquist, Scalia, and Thomas have prior means of 1.0, -3.0, -2.0, -2.0, 1.0, -1.0, 2.0, 2.5, and 2.5, respectively. Prior variances are set to 0.1. All other justices have diffuse priors with the prior mean set at 0 and prior variance set at 1.0.

**Table S1. SG and justice ideal points, indifference model**

<b>Solicitor General</b>		<b>Justice</b>	
Simon Sobeloff	.626	Hugo Black	-.950
Lee Rankin	-.056	Stanley Reed	.381
Archibald Cox	-.699	Felix Frankfurter	.356
Thurgood Marshall	.033	William Douglas	-1.963
Erwin Griswold	.027	Robert Jackson	.313
Robert Bork	.109	Harold Burton	.413
Daniel Friedman*	-.325	Tom Clark	-.022
Wade McCree	-.225	Sherman Minton	.252
Rex Lee	.472	Earl Warren	-.854
Charles Fried	1.136	John Marshall Harlan II	.497
William Bryson*†	1.060	William Brennan	-.821
Kenneth Starr	.931	Charles Whittaker	.363
William Bryson*‡	.401	Potter Stewart	.114
Drew Days	-.353	Byron White	.174
Walter Dellinger*	-.977	Arthur Goldberg	-.723
Seth Waxman	-.007	Abe Fortas	-1.003
Barbara Underwood*	-1.044	Thurgood Marshall	-.900
Theodore Olsen	.826	Warren Burger	.624
Paul Clement	.824	Harry Blackmun	-.037
Gregory Garre	.554	Lewis Powell	.362
Edwin Kneedler*	.931	William Rehnquist	1.072
Elena Kagan	.085	John Paul Stevens	-.243
Neal Katyal*	-.011	Sandra Day O'Connor	.650
Donald Verrilli	-.166	Antonin Scalia	1.379
		Anthony Kennedy	.762
		David Souter	.105
		Clarence Thomas	1.815
		Ruth Bader Ginsburg	-.037
		Stephen Breyer	.019
		John Roberts	1.209
		Samuel Alito	1.379
		Sonia Sotomayor	-.005
		Elena Kagan	.052

Notes: \* Acting solicitor general. † William Bryson's appointment by President George H.W. Bush. ‡ Bryson's appointment by President Bill Clinton. Unless otherwise noted, these are the ideal points employed in the paper.

**Table S2. SG and justice ideal points, missing-at-random model**

<b>Solicitor General</b>		<b>Justice</b>	
Simon Sobeloff	.928	Hugo Black	-.920
Lee Rankin	.055	Stanley Reed	.409
Archibald Cox	-1.216	Felix Frankfurter	.390
Thurgood Marshall	-.589	William Douglas	-1.870
Erwin Griswold	.334	Robert Jackson	.338
Robert Bork	.058	Harold Burton	.446
Daniel Friedman*	-.579	Tom Clark	.009
Wade McCree	-.139	Sherman Minton	.279
Rex Lee	.571	Earl Warren	-.816
Charles Fried	1.478	John Marshall Harlan II	.541
William Bryson*†	1.134	William Brennan	-.776
Kenneth Starr	1.618	Charles Whittaker	.399
William Bryson*‡	.529	Potter Stewart	.147
Drew Days	-.346	Byron White	.212
Walter Dellinger*	-1.158	Arthur Goldberg	-.689
Seth Waxman	.065	Abe Fortas	-.962
Barbara Underwood*	-1.078	Thurgood Marshall	-.842
Theodore Olsen	1.165	Warren Burger	.688
Paul Clement	.938	Harry Blackmun	-.000
Gregory Garre	.730	Lewis Powell	.408
Edwin Kneedler*	1.359	William Rehnquist	1.191
Elena Kagan	.157	John Paul Stevens	-.213
Neal Katyal*	.087	Sandra Day O'Connor	.723
Donald Verrilli	-.331	Antonin Scalia	1.538
		Anthony Kennedy	.837
		David Souter	.149
		Clarence Thomas	1.989
		Ruth Bader Ginsburg	.001
		Stephen Breyer	.060
		John Roberts	1.319
		Samuel Alito	1.500
		Sonia Sotomayor	.032
		Elena Kagan	.098

Notes: \* Acting solicitor general. † William Bryson's appointment by President George H.W. Bush. ‡ Bryson's appointment by President Bill Clinton.

**Table S3. Comparison of solicitor general ideal points with existing measures of ideology**

**A. Indifference-allowing ideal points**

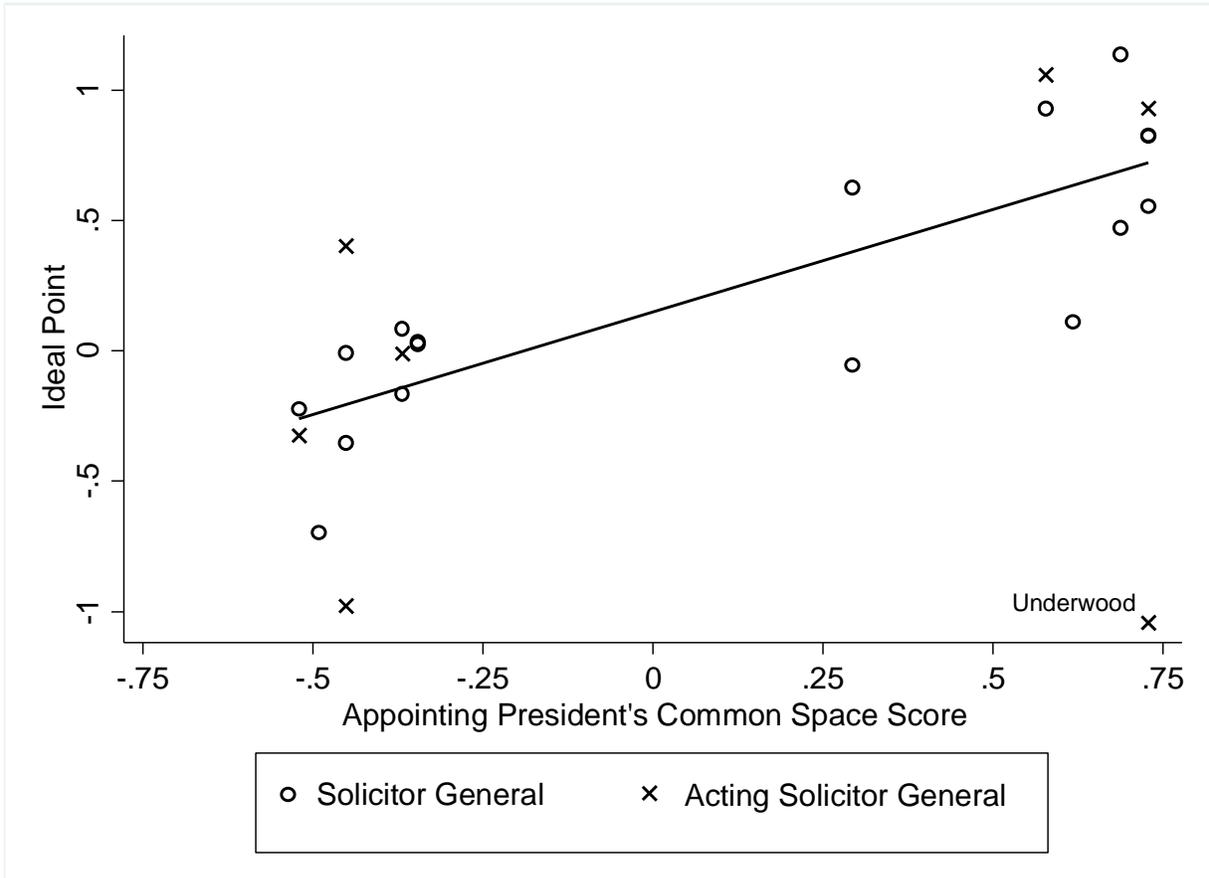
Existing Measure	Correlation with Ideal Point Estimate (Including Acting SGs)	Correlation with Ideal Point Estimate (Excluding Acting SGs)
% Conservative Briefs (N = 8)	.314	.314
President's Party – Republican	.593*	.773*
President's Common Space	.606*	.829*
N	24	17

**B. MAR-based ideal points**

Existing Measure	Correlation with Ideal Point Estimate (Including Acting SGs)	Correlation with Ideal Point Estimate (Excluding Acting SGs)
% Conservative Briefs (N = 8)	.298	.298
President's Party – Republican	.623*	.743*
President's Common Space	.629*	.772*
N	24	17

\*  $p \leq .05$ . Cell entries are correlation coefficients. The % Conservative Briefs measure is from Segal (1988).

Figure S1. Ideal points of solicitors general and their appointing presidents



**Table S4. Explaining the location of solicitors general in the Court’s legal policy space, including non-appointing presidents**

Independent Variable	SGs
Appointing President	.767* (.203)
Non-Appointing President	-.023 (.550)
Served One President	.206 (.297)
Supreme Court	.110 (.297)
Congress	-1.89 (.982)
Constant	-.012 (.172)
N	24
F-test	3.36*
R <sup>2</sup>	.483

\*  $p \leq .05$  (two-tailed). Cell entries are OLS regression estimates (and standard errors). *Non-Appointing President* is the Common Space Score for a second president under which an SG served. If an SG served under only one president, *Non-Appointing President* is set to zero and *Served One President* is set to one.

**Table S5. Explaining the location of SGs in the Court’s legal policy space, excluding acting SGs**

Independent Variable	SGs	SGs and Justices
Appointing President	.747* (.154)	.978* (.182)
Supreme Court	.112 (.206)	---
Congress	-.672 (.768)	5.89* (1.36)
SG	---	-.117 (.172)
SG × Appointing President	---	-.207 (.297)
SG × Congress	---	-5.56* (1.77)
Constant	.019 (.113)	.286* (.100)
N	17	50
F-test	10.0*	11.3*
R <sup>2</sup>	.698	.563

\*  $p \leq .05$  (two-tailed). Cell entries are OLS regression estimates (and standard errors).

**Table S6. Explaining the location of SGs in the Court’s legal policy space, using MAR-based ideal point estimates**

Independent Variable	SGs	SGs and Justices
Appointing President	.982* (.253)	1.02* (.221)
Supreme Court	.469 (.344)	---
Congress	-2.34 (1.23)	6.00* (1.66)
SG	---	-.303 (.189)
SG × Appointing President	---	.023 (.324)
SG × Congress	---	-7.68* (1.98)
Constant	-.157 (.209)	.343* (.122)
N	24	57
F-test	6.6*	10.4*
R <sup>2</sup>	.498	.504

\*  $p \leq .05$  (two-tailed). Cell entries are OLS regression estimates (and standard errors).

**Table S7. SG and justice ideal points, civil rights and liberties**

<b>Solicitor General</b>		<b>Justice</b>	
Simon Sobeloff	---	Hugo Black	-1.042
Lee Rankin	---	Stanley Reed	1.139
Archibald Cox	-.857	Felix Frankfurter	.242
Thurgood Marshall	---	William Douglas	-2.879
Erwin Griswold	-.083	Robert Jackson	.129
Robert Bork	.034	Harold Burton	.656
Daniel Friedman*	---	Tom Clark	.355
Wade McCree	-.023	Sherman Minton	1.065
Rex Lee	.508	Earl Warren	-1.231
Charles Fried	.997	John Marshall Harlan II	.485
William Bryson*†	---	William Brennan	-1.355
Kenneth Starr	.801	Charles Whittaker	.237
William Bryson*‡	---	Potter Stewart	-.045
Drew Days	.024	Byron White	.213
Walter Dellinger*	-.045	Arthur Goldberg	-1.558
Seth Waxman	.158	Abe Fortas	-1.542
Barbara Underwood*	----	Thurgood Marshall	-1.659
Theodore Olsen	1.025	Warren Burger	.663
Paul Clement	.898	Harry Blackmun	-.114
Gregory Garre	.592	Lewis Powell	.304
Edwin Kneedler*	---	William Rehnquist	1.271
Elena Kagan	.025	John Paul Stevens	-.400
Neal Katyal*	.037	Sandra Day O'Connor	.585
Donald Verrilli	.488	Antonin Scalia	1.508
		Anthony Kennedy	.746
		David Souter	-.054
		Clarence Thomas	2.204
		Ruth Bader Ginsburg	-.203
		Stephen Breyer	-.066
		John Roberts	1.231
		Samuel Alito	1.611
		Sonia Sotomayor	-.159
		Elena Kagan	-.097

Notes: \* Acting solicitor general. † William Bryson's appointment by President George H.W. Bush. ‡ Bryson's appointment by President Bill Clinton. Ideal points are not estimated for the SGs who filed fewer than 10 amicus curiae briefs in this issue area.

**Table S8. SG and justice ideal points, economics**

<b>Solicitor General</b>		<b>Justice</b>	
Simon Sobeloff	---	Hugo Black	-1.351
Lee Rankin	.020	Stanley Reed	.200
Archibald Cox	-.125	Felix Frankfurter	.784
Thurgood Marshall	---	William Douglas	-1.744
Erwin Griswold	---	Robert Jackson	.596
Robert Bork	---	Harold Burton	.347
Daniel Friedman*	---	Tom Clark	-.460
Wade McCree	-.592	Sherman Minton	-.188
Rex Lee	-.330	Earl Warren	-.855
Charles Fried	-.422	John Marshall Harlan II	.773
William Bryson*†	---	William Brennan	-.497
Kenneth Starr	.072	Charles Whittaker	.913
William Bryson*‡	---	Potter Stewart	.445
Drew Days	-.459	Byron White	-.020
Walter Dellinger*	---	Arthur Goldberg	-.173
Seth Waxman	.107	Abe Fortas	-.371
Barbara Underwood*	---	Thurgood Marshall	-.326
Theodore Olsen	.162	Warren Burger	.661
Paul Clement	.419	Harry Blackmun	.020
Gregory Garre	---	Lewis Powell	.502
Edwin Kneedler*	---	William Rehnquist	1.110
Elena Kagan	.215	John Paul Stevens	-.064
Neal Katyal*	---	Sandra Day O'Connor	1.039
Donald Verrilli	-.929	Antonin Scalia	1.845
		Anthony Kennedy	.959
		David Souter	.506
		Clarence Thomas	2.166
		Ruth Bader Ginsburg	.337
		Stephen Breyer	.280
		John Roberts	1.428
		Samuel Alito	1.347
		Sonia Sotomayor	.333
		Elena Kagan	.250

Notes: \* Acting solicitor general. † William Bryson's appointment by President George H.W. Bush. ‡ Bryson's appointment by President Bill Clinton. Ideal points are not estimated for the SGs who filed fewer than 10 amicus curiae briefs in this issue area.

**Figure S2. Ideal points of solicitors general and their appointing presidents, civil liberties and rights**

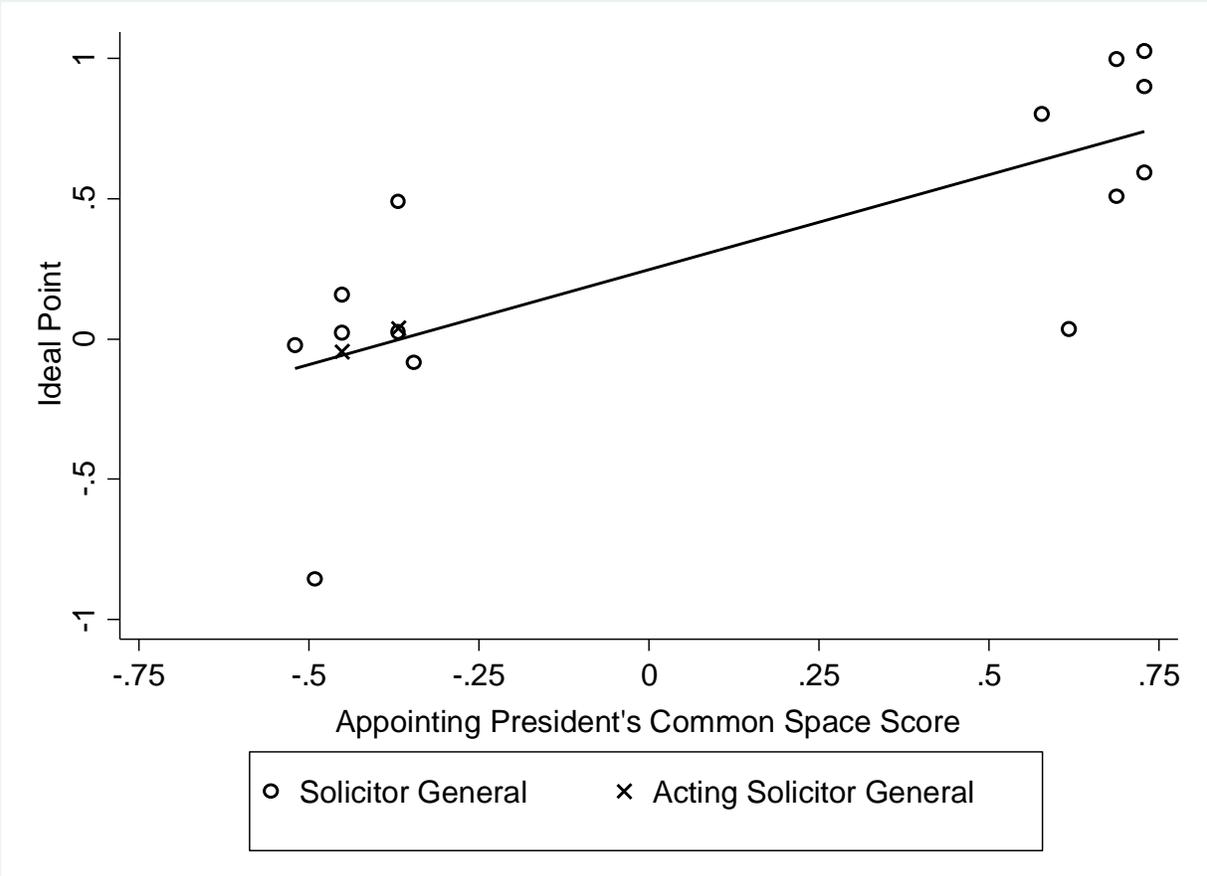
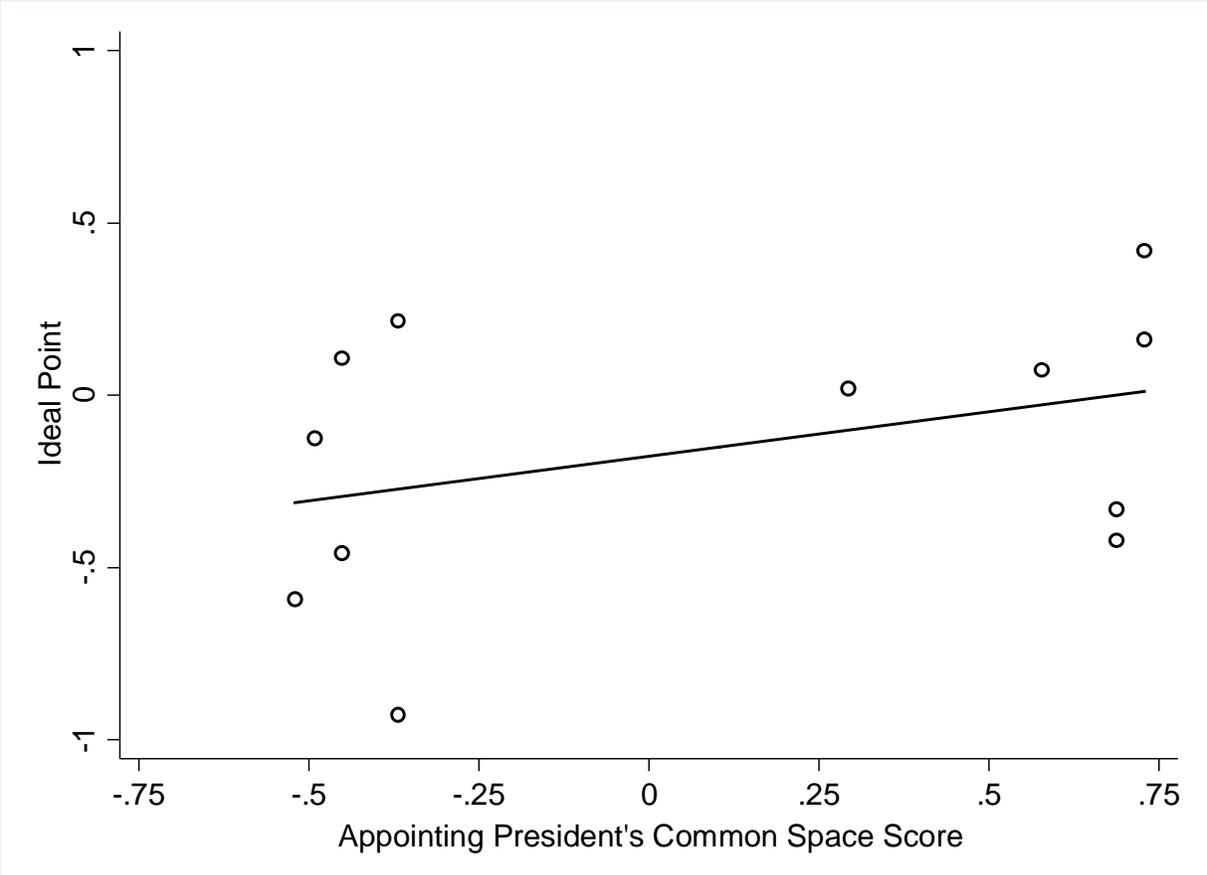


Figure S3. Ideal points of solicitors general and their appointing presidents, economics



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