

# Party pressure in roll call votes\*

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Paper prepared for presentation at the Annual Meeting of the  
American Political Science Association (Washington D.C., August 28-31, 2014)

## Abstract

Assessing what roll call votes can tell us about legislator preferences has proved to be an important conundrum in legislative studies. This is due to two reasons: first, roll call votes are likely to occur for very specific votes in most parliaments, and second, having a roll call vote (i.e., a public record of how a legislator has voted) will influence a legislator's voting behavior. Drawing on a unique dataset comprising all votes from the Swiss parliament, some of which were automatically roll called while for others legislators requested them, we are able to identify both the effects of roll call votes and the ones due to selecting particular topics for roll call votes. As we also have information on who requested the roll call, we can distinguish among motivations for calling a roll call. We find, based on an extension of the two cut-point IRT model (Clinton, Jackman and Rivers, 2004), that members of the Swiss lower house support more leftist positions when their voting behavior is exposed to scrutiny, compared to situations when their behavior is not visible. Thus, we can demonstrate that inferences drawn from roll call votes, when these do not cover the full universe of voting decisions, lead to biased inferences.

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\*An earlier version of this paper was prepared for presentation at the Annual Meeting of the Midwest Political Science Association (Chicago April 3-6, 2014) and the Annual Conference of the European Political Science Association (Edinburgh, June 16-18, 2014). Helpful comments by participants at these conferences and by Bjørn Høyland, as well as research assistance by Sarah Bütikofer and Fabian Wagner is gratefully acknowledged as is the partial financial support by the Swiss National Science Foundation (Grants No. 100012-111909 and 100012-129737).

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# 1 Introduction

Due to considerable developments in empirical models and the increasing ease with which data on parliaments can be collected, more and more studies employ roll call data to make important inferences about parliaments. These studies, however, often neglect the fact that these inferences are based for most parliaments on a subset of all votes. Only a few parliaments, for instance the Polish Sejm (for some recent work on this chamber, see Dobrowolski, Mazurkiewicz and Noury, 1999; Noury, Dobrowolski and Mazurkiewicz, 1999; Zielinski, 2001; Kistner, 2006; Hug and Wüest, 2011; Carroll and Nalepa, 2012) record and publish all votes taken in plenary sessions (for recent information on voting procedures, see Saalfeld, 1995; Crisp and Driscoll, 2012; Hug, Wegmann and Wüest, 2012).<sup>1</sup>

The question then arises what analyses of roll call votes can tell us. While one branch of the literature is mostly interested in the cohesiveness of political parties, another one focuses mostly on using roll call data as revealed preferences. Various scaling methods (for excellent reviews, see Poole, 2005; McCarty, 2011; Carroll and Poole, 2014 (forthcoming)) allow us to generate issue dimensions and positions thereon, which reflect the revealed preferences of MPs. As amongst others Spirling and McLean (2006, 2007) have argued (see also Rosenthal and Voeten, 2004), however, these revealed preferences might be influenced by various factors, making the generated dimensions and positions largely meaningless. Most important in this regard are certainly party and constituency pressures (Fiorina, 1975; Levitt, 1996).

As already Fiorina (1975) noted and discussed on the basis of a theoretical model, quite some strong assumptions are necessary to allow us to learn anything from roll call data. To assess the adequacy of these assumptions and to disentangle various influences on MPs voting information generated under different rules is necessary. Some studies employ temporal variation in the rules (Roberts, 2007; Hix, Noury and Roland, 2012; Hug, 2012; Cantú, Desposato and Magar, 2013; Mühlböck and Yordanova, 2014 (forthcoming)) to assess their effects in the US Congress, respectively the European and Mexican parliament. To our knowledge only the study by Hug (2010) can draw on data generated under different voting rules in the Swiss parliament and show that roll call votes differ

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<sup>1</sup>Some authors, for instance Londregan (2000), would argue that even in these cases the stages before plenary debate affect what we might learn from roll call vote data.

considerably from all other votes. While his study limited itself to assess possible biases in estimating the cohesion of parties, in this paper we wish to assess more directly the effects of party pressure in roll call votes (see also Traber, Hug and Sciarini, 2014 (forthcoming)).

To do so we rely on a hierarchical item-response theory (IRT) model as proposed by Clinton, Jackman and Rivers (2004) and employed by Høyland (2010) and Hug (2012) for studies on the European parliament. We use this hierarchical model to assess whether the estimated ideal-points vary as a function of the procedure under which a vote has taken place. More specifically we wish to assess whether roll call votes differ from other votes and whether the request by a party makes a difference compared to automatically published votes. We also allow the implicit cutpoints in the IRT model (more on this below) to vary according to the type of vote. Proceeding like this allows us to show that ideal-points estimated on the basis of voting data are considerably affected by the publicity of votes and by the party who requests a roll call vote. For the parliament we study, namely the Swiss lower house, we find that in roll call votes members of parliament (MPs) situate themselves systematically to the left compared to their position in unpublished votes. This goes hand in hand, however, with cutpoints that are also almost systematically moved to the left of the political spectrum in such votes. These results suggest that considering the way in which roll call voting data is generated is not only important when studying cohesion (see Hug, 2010; Traber, Hug and Sciarini, 2014 (forthcoming)), but also for estimating MPs' ideal-points.

In the next section we give a brief overview over the literature on which we draw in this paper. Section three is devoted to a presentation of the empirical model and the data we use to generate our results. The latter are presented in section four, while section five concludes.

## 2 Literature

Roll call data allows for important insights into the working of parliaments.<sup>2</sup> While collecting such data proved cumbersome in earlier times (for a description of data collection for the French and British parliament, see Burton, 1936; Ay-

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<sup>2</sup>This section draws in part on Hug (2013).

delotte, 1963), more recently many parliaments make such data almost immediately available (see for instance <http://blog.openingparliament.org/post/58716965078/availability-of-voting-results-in-parliaments>, accessed March 15, 2014). Hand-in-hand with this increased ease with which data is available, tools to analyze the roll call record improved. While early work (see for instance Lowell, 1901; Rice, 1925) largely devised and used measures to assess the degree of cohesion of parties or other groups, later work aimed at uncovering, based on voting data, the positions of MPs. Thus, Harris (1948) employed a factor analytic approach to study ten votes from the 80th US Senate, while MacRae (1958) expanded this type of study to cover larger sets of votes. A notable burst of interest in such studies appeared with Poole and Rosenthal's (1985) suggestion to study roll call votes based on an explicit voting model. Clinton, Jackman and Rivers's (2004) proposal to base these analyses on item-response theory (IRT) models provided another impetus for such studies, as they are more flexible and allow for many different extensions.

These innovations allowed for much more detailed assessments of what roll call votes can tell us. Important topics are in this regard the way in which various principals of MPs influence the latter's behavior, i.e., by how much parties, voters, etc. sway a particular MP in one way or another. The ease with which data is available and the technical innovations have, however, also led to a situation where scholars have a tendency to neglect the way in which the data they use is generated. First of all, few parliaments carry out all their business by roll call votes. Thus, in many parliaments sets of votes are either held secretly, or as signal votes without them being recorded, and thus unavailable for scholars to study.

More broadly, one may argue that in most parliaments either all or a set of votes are published automatically, or an actor, often MPs and/or party groups in parliament request roll call votes. As a series of scholars argue, however, the more or less visible character of votes is linked to the principals of MPs who can observe the latter's behavior, i.e., either voters, party groups in parliament, or parties etc. (Carey, 2009). Consequently, if these principals wish to hold their agents accountable, the degree of publicity will affect the behavior of MPs. If this publicity depends in addition on an actor's choice to request a roll call, it is likely that this actor has also particular intentions in mind. Consequently,

when considering roll call data, we need to take into account that votes differ, i.e. are either secret, signal or open votes, suggesting that different principals are informed on the MPs' behavior. In addition to this, however, we also need to consider who ensures that a vote is not secret or becomes a roll call vote. This may either occur automatically (i.e., certain votes by definition have to be carried out by roll call votes),<sup>3</sup> or if an actor requests a roll call vote she may want to discipline the members of a party group (Carrubba, Gabel and Hug, 2008), for instance, or signal the behavior of party group members or another actor (Finke, 2014 (forthcoming)). This would suggest that in a roll call vote requested by a particular actor we may observe two effects, namely on the one hand the effect of the publicity of the vote, and on the other hand the effect of disciplining or signaling motives.

To disentangle these different effects, however, we need from the same parliament information on secret, automatically published and requested roll call votes. Comparing the former two sets of votes allows us to assess whether the publicity of a vote alone makes MPs behave differently. Comparing automatically published votes and requested roll call votes allows us to assess whether a request by a particular actor influences MPs beyond the effect due to the publicity of a vote.

### 3 Data and model

Luckily, data available on the Swiss lower house comes very close to this ideal situation. Starting in 1996 all votes in this chamber were carried out with the help of an electronic voting system recording all individual votes.<sup>4</sup> Until 2007 these individual votes were only published in the minutes of the parliament if they dealt with urgent matters or the “Schuldenbremse” (i.e., a break on increases in public debt) or were total or final passage votes. In addition 30 MPs, by signing a petition, could also request that the vote was published, by imposing a roll call vote. By 2007 parliament decided to make all voting information public for votes

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<sup>3</sup>For instance, the European parliament introduced new rules of procedure ensuring that all final passage votes on legislative matter are carried out by a roll call vote (Hix, Noury and Roland, 2012; Hug, 2012; Mühlböck and Yordanova, 2014 (forthcoming)).

<sup>4</sup>Only a few votes in the upper chamber are roll called (for an analysis using these votes, see Bütikofer and Hug, 2010). Both Hug and Martin (2011) and Bütikofer (2014) use data from the upper house generated on the basis of video-streams from the Swiss upper house.

Table 1: Requested roll call votes on party groups (47th legislative period, 2003-2007)

session	requested	CVP	FDP	SP	SVP
1	23	0	0	1	0
2	14	0	0	3	0
3	40	0	0	0	0
4	19	0	0	0	0
5	26	0	0	0	1
6	43	0	1	20	17
7	29	0	0	6	1
8	38	4	0	16	5
9	34	0	1	21	3
10	44	8	0	9	6
11	43	3	0	14	8
12	5	0	0	3	2
13	41	3	0	28	4
14	34	1	0	0	0
total	433	19	2	121	47
total (unique and identified requests)	184	18	2	118	46

starting in 2007, while the full voting record from 1996 to 2007 was only made available for scientific research. Requests for roll call votes before 2007 had to be submitted to the chairperson of the assembly on a simple piece of paper signed by at least 30 MPs. Unfortunately, the information who supported a request for a roll call vote was not published in the official minutes. For the 47th legislative period, and with the help of the archival staff, we were able to retrieve a large share of the petitions for roll call votes with the 30 or more signatures. We attempted, based on these signatures, to identify petitions proposed by the main government parties. Table 1 reports the results of our efforts. Overall in the 14 first sessions of the 47th legislative period 433 requested roll call votes occurred (while 1394 were secret and 442 automatically published votes), varying from 5 to 44 per session. For two sessions, namely the third and fourth, we were unable to identify the main parties requesting roll call votes. For the remaining twelve sessions, we were able to assign to one or more parties a considerable share of such requests. Overall the party most frequently associated with requesting a roll call vote is the leftist SP with 121, of which 118 the party carried alone. In second place comes the rightist SVP with 47 requests, of which 46 were proposed by this party alone. Much less frequent are roll call vote requests by the two centrist parties CVP and FDP, with 19 (18 requested alone) and 2 (all requested alone) requests respectively.

To assess how the behavior of MPs differs as a function of the publicity of a vote and of who requests a roll call vote we rely for our empirical model on Clinton,

Jackman and Rivers’s (2004) model extension of a basic IRT model, which allows for several sets of cut-points and differences in terms of ideal-points.<sup>5</sup> Instead of only having two sets of votes as in Clinton, Jackman and Rivers’s (2004) and Høyland’s (2010) applications (namely votes with and without party pressure, respectively legislative and non-legislative votes) we have six. Our baseline is formed by all votes in the Swiss parliament that are not published during the 47th legislative period in the twelve sessions for which we have at least partial information of roll call vote requests (thus dropping the second and the third session, for which we lack the relevant data). The second set of votes is formed by all those votes that were automatically published, namely all final passage and total votes, those dealing with urgent measures and those related to the “Schuldenbremse.” We assume that these votes differ from the former with regard to the location of the cut-points, i.e., the difficulty parameter in the IRT model, for the four main governing parties. The next four sets of votes are formed by roll call votes that were requested, respectively by the four main party groups, namely the CVP, the FDP, the SP and the SVP.

For these latter votes we allow cutpoints for each party separately to change. As we failed to obtain for each and every requested roll call vote the list of signatures and could not identify all the signatures, we have to drop a significant number of requested roll call votes in this analysis. While the four sets of requested roll call votes comprise 189 votes (184, if we exclude those votes where two requests for roll call votes were submitted), in the sessions we consider a total of 340 roll call votes were requested. In order to assess whether this selection of only half the requested roll call votes affects our results, we also estimated a model, where no distinction was made in terms of who requests the roll call vote, allowing us to use all 340 requested roll call votes in our analysis.<sup>6</sup>

We thus estimate the following model (abusing slightly the notation):

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<sup>5</sup>Høyland (2010) uses the same setup to show that in non-legislative votes the European parliament (EP) behaves quite differently than in votes dealing with legislative matters. Hug (2012) also uses this model to assess the changes that have occurred in the EP after a modification in the rules making all final passage votes roll call votes.

<sup>6</sup>As the results did not differ significantly, we relegated the presentation of these results to the appendix.

$$\begin{aligned}
\pi_{ij} &= Pr(y_{ij}|\theta_i, \alpha_j, \beta_j, \delta_{pj}, \gamma_j) \\
&= F(\beta_j(\theta_i + \gamma_j * rcv_j) - \alpha_j - \delta_{pj} * p_i * rcv_j)
\end{aligned}
\tag{1}$$

What we observe from this model are the votes  $y_{ij}$ , whether the vote was a roll called  $rcv_j$  and to which party  $p_i$  a legislator belongs. Based on this observed data we estimate each legislator’s ideal-point  $\theta_i$  and by how much this estimated ideal-point differs in roll call votes ( $\gamma_j$ ).<sup>7</sup>  $\delta_{pj}$ , finally, estimates by how much the cut-points differ for MPs of each of the four main parties, compared to the MPs of all other parties in roll call votes. We estimate this model under the assumption that the relevant policy space is one-dimensional. In the empirical part we will provide evidence that this assumption is largely justified, as allowing for multiple dimensions does not increase significantly the predictive accuracy of the model.

## 4 Results

Our model allows for a shift in ideal-points and in the item difficulty parameter in roll call votes. The model was estimated with Plummer’s (2010) *jags*-program. The results are based on chains of 50000 burn-ins and followed by 5000 iterations from which every fifth was sampled.<sup>8</sup> In figure 1 we show the distribution of the average estimated ideal-points of the members of the four main party group.<sup>9</sup>

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<sup>7</sup>As we can identify which roll call votes occurred automatically and which were requested by MPs, we can also explore differences in the vote-specific estimates according to this distinction. We can do the same thing also with the information which party requested a roll call vote. In the appendix we present *jags* code used to make these analyses possible.

<sup>8</sup>In the appendix we report the results of some convergence tests. In addition, we note that the model correctly predicts 92.2 % of all vote choices by MPs, which corresponds to a proportionate reduction of error of 78.6 %. A simple one-dimensional IRT-model, estimated with Jackman’s (2012) *pscl* library generates 86.7 % correct predictions, while a model with two-dimensions increases this percentage only to 89.2 %. We also estimated these two models based on only the published votes and obtained respective percentages of correctly predicted votes of 84.6 % and 84.9 % (for our one-dimensional model this percentage for published votes is much higher, namely 91.7 %, though slightly less than the overall percentage of correctly predicted votes). Given these results we limit the estimations of our model to a one-dimensional policy space.

<sup>9</sup>We indicate in each panel on how many MPs the density of the distribution was calculated. We do not depict the 28 MP that do not belong to one of the four government parties at the time (their distribution is quite flat, with a mode to the left of the ideological spectrum). Even though the lower house of the Swiss parliament has only 200 members, the number of MPs appearing in our analyses is larger, as several MPs stepped down and were replaced by others.



These results largely conform to conventional wisdom with the social-democrats (SP) mostly located to the left, while the members of the rightist SVP (Swiss People’s Party) situate themselves at the other end of the scale. The members of the two centrist parties CVP (Christian-democrats) and FDP (Liberals) are located around the middle of the scale.<sup>10</sup>

As we are interested in understanding how voting behavior changes in roll call votes a first important piece of information comes from our estimated  $\gamma$  parameter. The latter indicates by how much the estimated ideal-point for each MP differs in roll call votes (independent of whether they were automatically published or requested by a particular actor). Figure 2 shows the distribution of the posterior means of this shift in ideal-points for the members of each governing party. For each of these parties we detect a distribution which is tilted to the left.<sup>11</sup> Interesting to note is that this  $\gamma$  parameter is estimated as being for almost all MPs of the FDP as being different from zero. More moderate effects appear for the CVP and the SP whose members shift their ideal-point to a lesser extent. Among the SVP, however, the effect of roll call votes appears to be the weakest as the distribution of the estimated  $\gamma$  parameters straddles around the value of zero.<sup>12</sup>

Finally, in figure 3 we depict the implied sets of distributions of ideal-points for the four parties, namely one for secret votes and the other for published votes. It underlines again that the published votes lead to a clear leftward shift of the ideal-points of MPs in the Swiss lower house.<sup>13</sup>

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<sup>10</sup>As mentioned above in this analysis we only took into account the requested roll call votes for which we could identify a single party requesting the roll call. As this might influence our results we reestimated our model including all requested roll call votes and depict in figure 8 the exact same information as in figure 1. As this figure shows, also when considering all requested roll call votes, we still find the same distribution of ideal-points per party (figure 8). Consequently, the estimated ideal-points appear not to depend on whether or not we only include from the requested roll call votes those, for which we could identify a single party as the main requester.

<sup>11</sup>The same kind of distribution appears for the 28 MPs belonging to non-governing parties.

<sup>12</sup> The analysis underlying figure 2 is based on taking into account only automatically published votes and those roll call votes for which we were able to identify the party requesting it (in addition to all secret votes). If we do not restrict the analysis to this subset of requested roll call votes, we obtain estimates for the shift in ideal-points that are almost identical (see figure 9 in the appendix). Consequently, the behavior of MPs in requested roll call votes, for which we were unable to identify who requested it, is unlikely to be systematically different.

<sup>13</sup> Figure 10 in the appendix shows that this leftward shift is again almost identical if we consider the full set of requested roll call votes instead of only the ones for which we could identify a single requester.

Figure 1: Distribution of estimated ideal-points for the four main party groups (all unpublished, automatic roll call votes and those requested by single party groups)

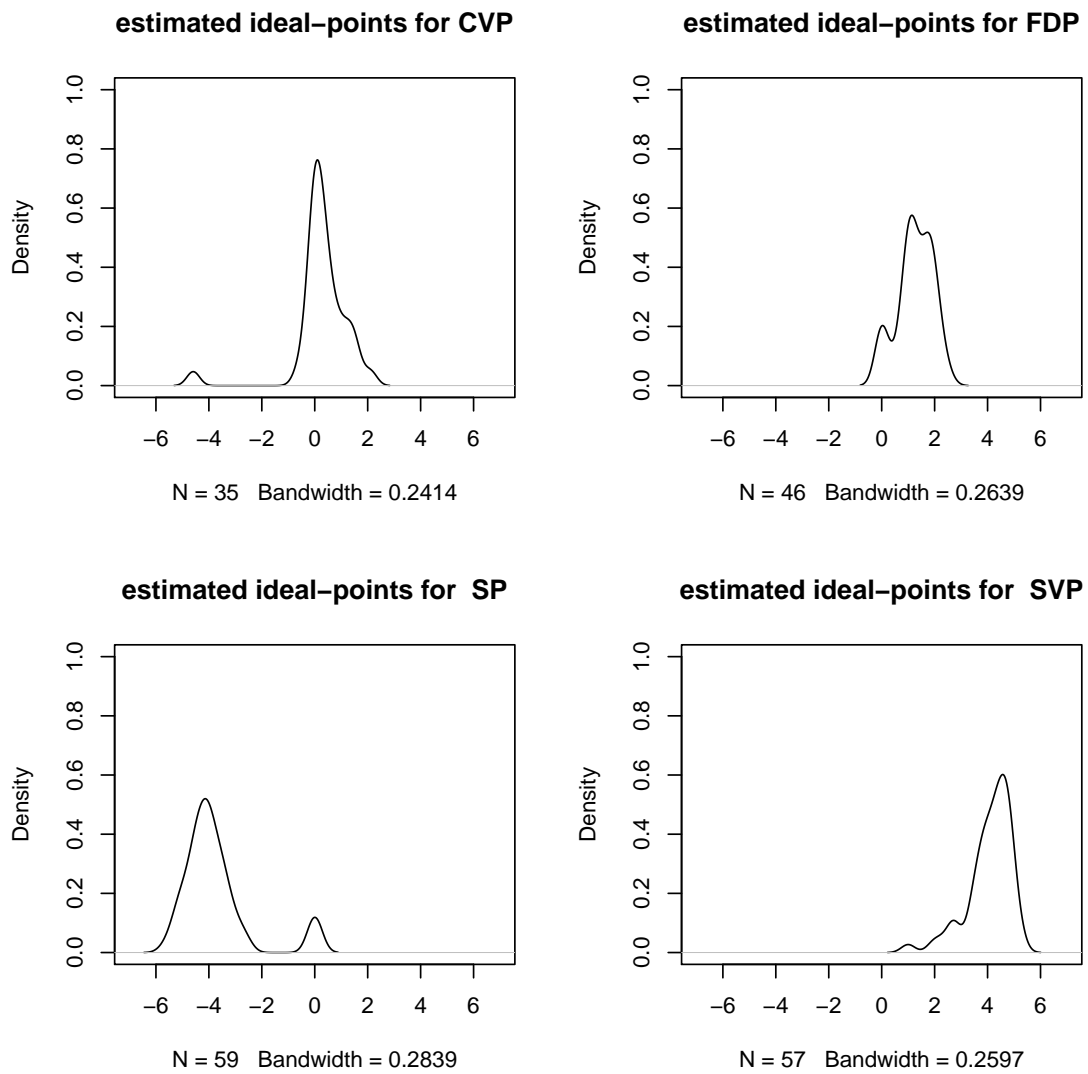


Figure 2: Estimated effect of roll call votes on the ideological positions of the members of the four main party groups (difference in ideal points, all unpublished, automatic roll call votes and those requested by single party groups)

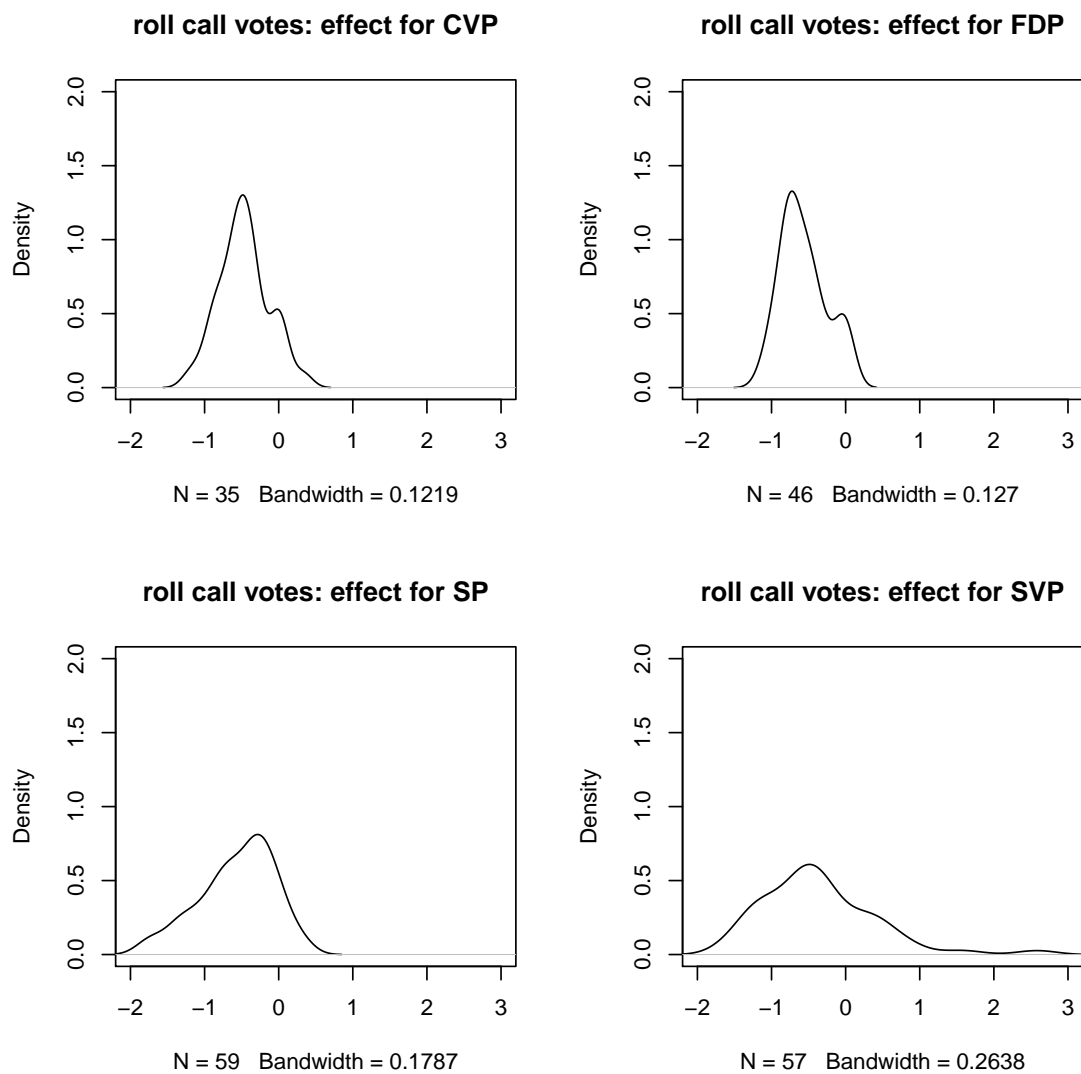
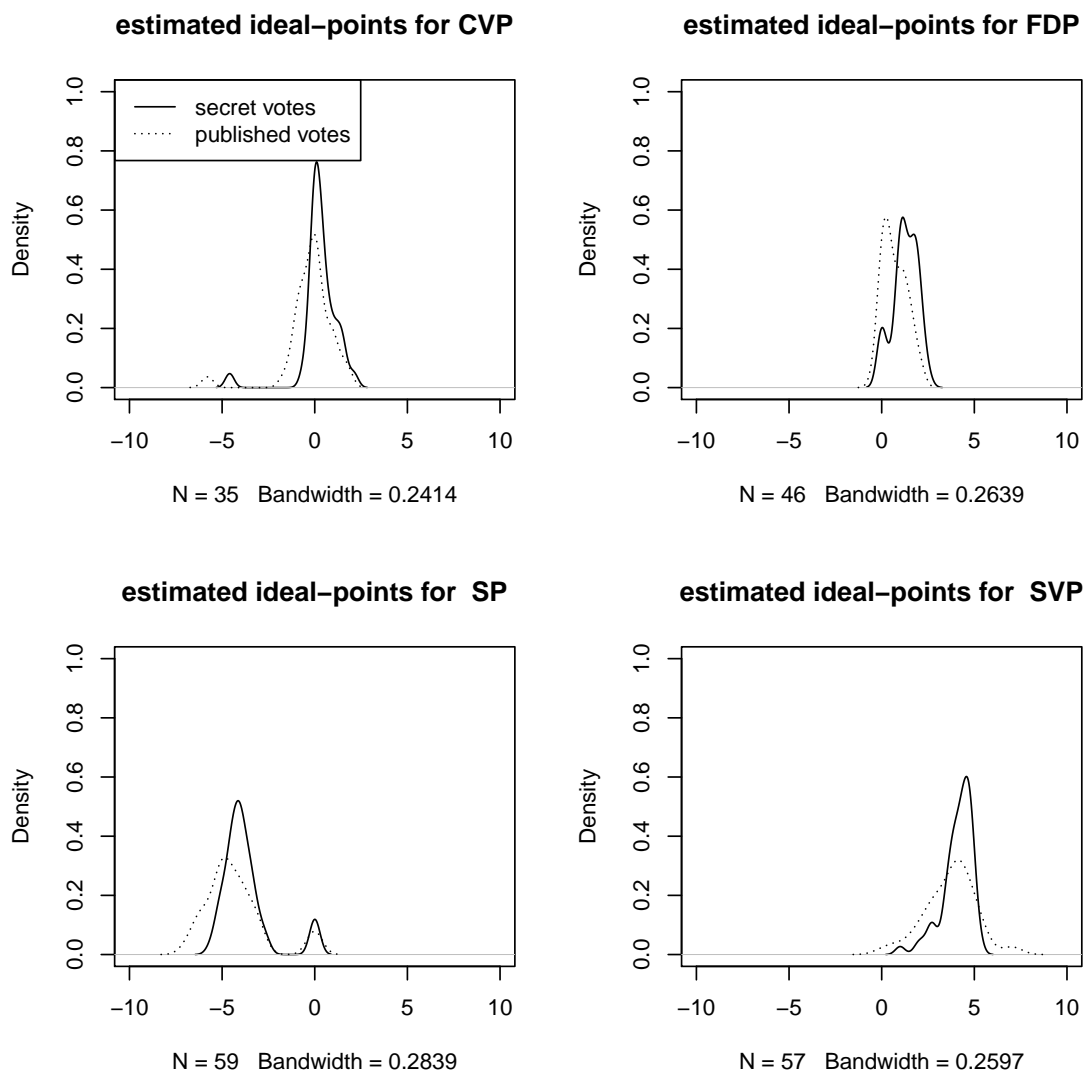


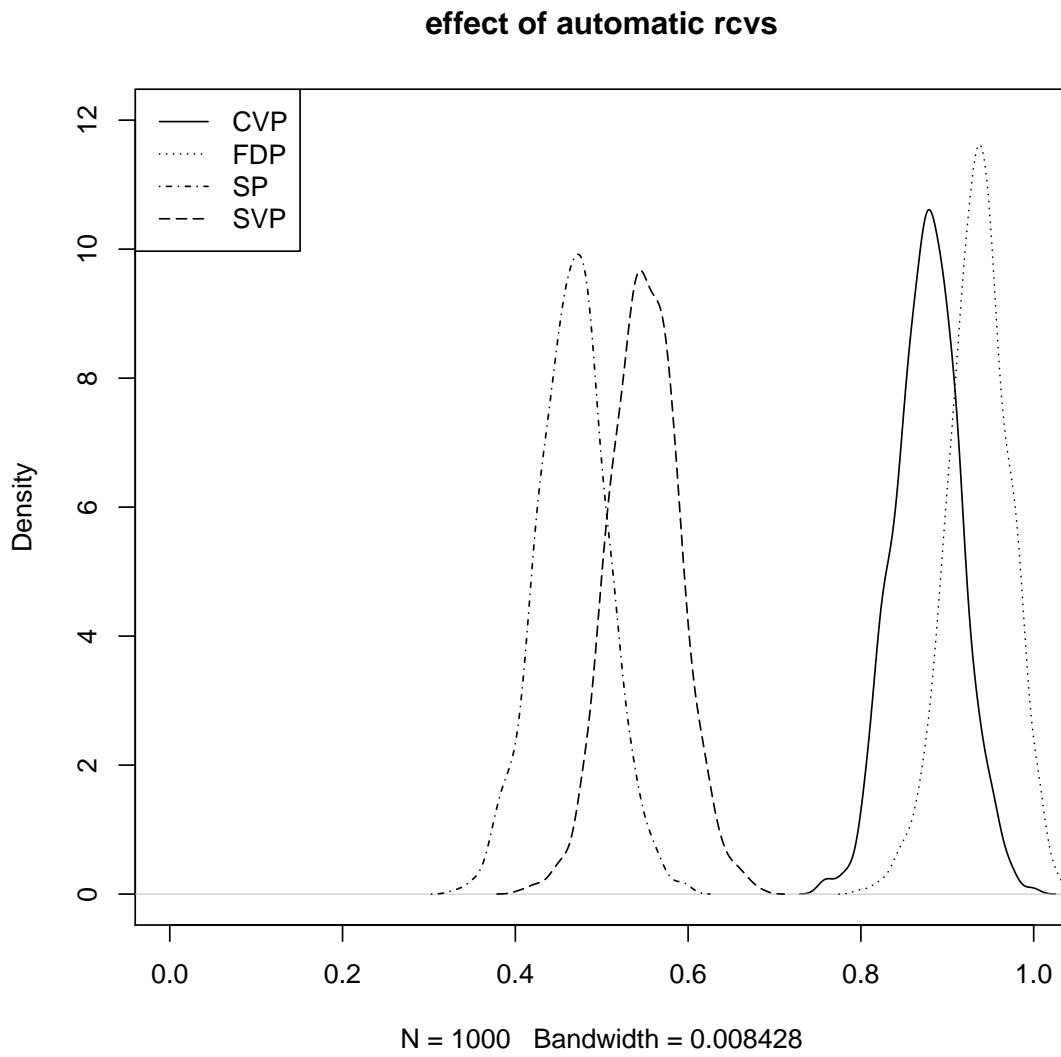
Figure 3: Distribution of estimated ideal-points for the four main party groups (all unpublished, automatic roll call votes and those requested by single party groups)



Our model also assumes that roll call votes have, for the four governing parties, a different item difficulty parameter. More specifically we assume that the item difficulty parameter  $\alpha$  is systematically different in roll call votes for each of the governing parties. Thus, instead of being equal to  $\alpha$  (as it was in secret votes and remains for the MPs from non-governing parties) it becomes  $\alpha + \delta_p$ , where the change in  $\delta$  is specific to each of the four governing parties  $p$ .

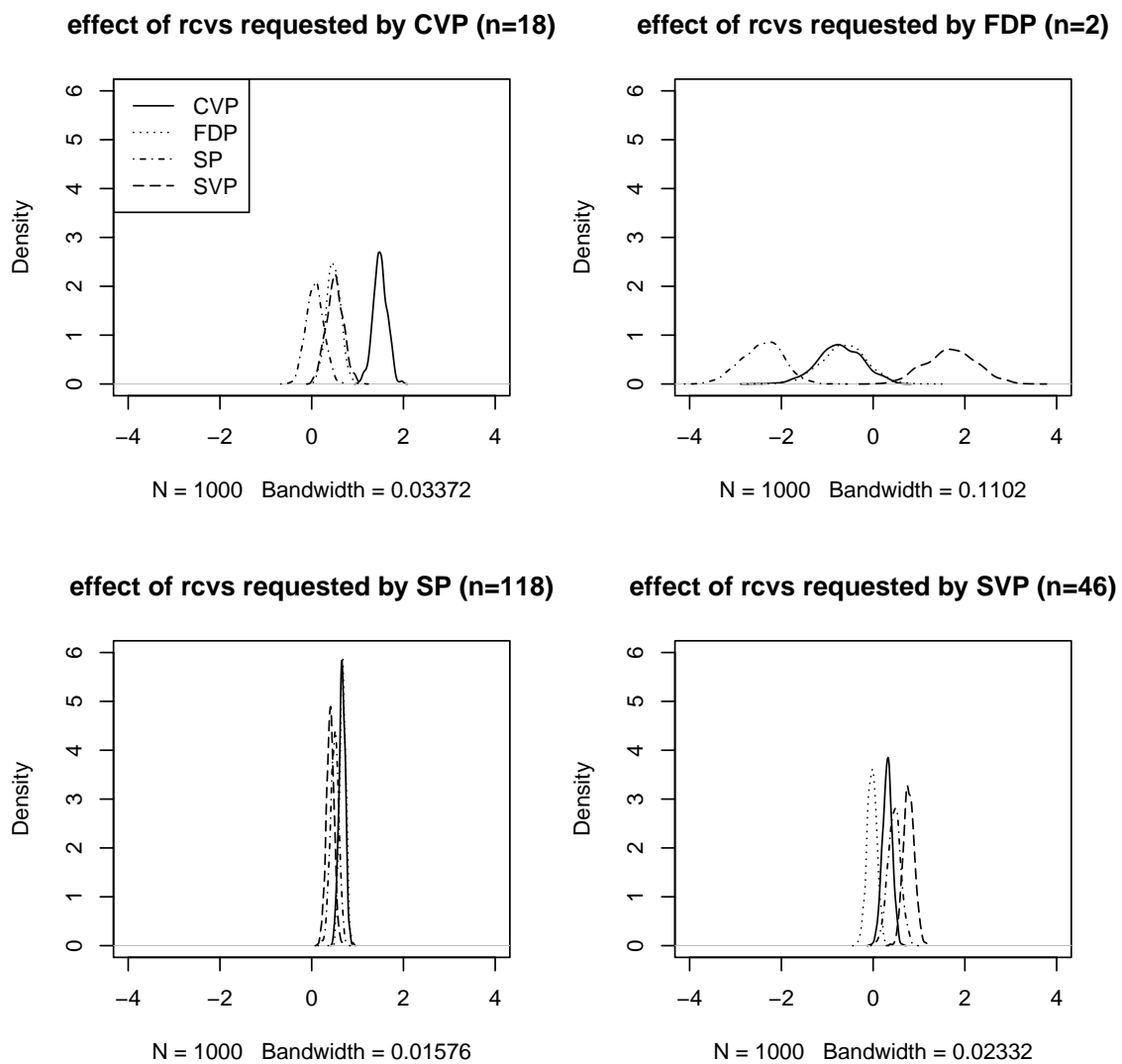
In figure 4 we depict this average change in the item difficulty parameter from secret to automatically published votes. We generated this graph by calculating for each draw from the posterior distribution of the four sets of  $\delta$ s the average for the set of automatically published votes. Thus, figure 4 nicely shows that the item difficulty parameters differ between secret and automatically published votes for all governmental parties compared to the ones for the remaining MPs and become more important. The rightward shift in figure 4 is most pronounced for the centrist CVP and FDP, while it is more moderate for the leftist SP and the rightist SVP. For all these parties we obtain average estimates of the change in the item difficulty parameter that are clearly positive (the 95 % credible intervals do clearly not comprise the value of 0.)

Figure 4: Effect of automatic roll call votes on the four main party groups compared to secret votes (item difficulty parameter)



As we have information on who requested a roll call vote (at least for a subset of votes), we can also assess whether this item difficulty parameter changes as a function of who requests the roll call vote. Figure 5 depicts these effects generated as discussed above and shows that the item difficulty parameter, if it changes, becomes larger (i.e.,  $\delta$  is positive) in requested roll call votes. If the request comes from the centrist CVP, which happens not too often, the item difficulty parameter becomes more positive for all parties except the SP. As requests by the FDP are infrequent, their effects have to be taken with a large grain of salt. The distribution depicted in the second panel of figure 5 suggests that only the SVP and the SP are affected, while requests by the FDP do not change the item difficulty parameter for centrist parties. The change in the item difficulty parameters is most systematic if the SP requests a roll call vote, but the shift is relatively small and of more or less the same size for all parties. Finally, requests for roll call votes by the rightist SVP lead to larger item difficulty parameters for all parties except the FDP, for which the 95 % credible interval includes 0.

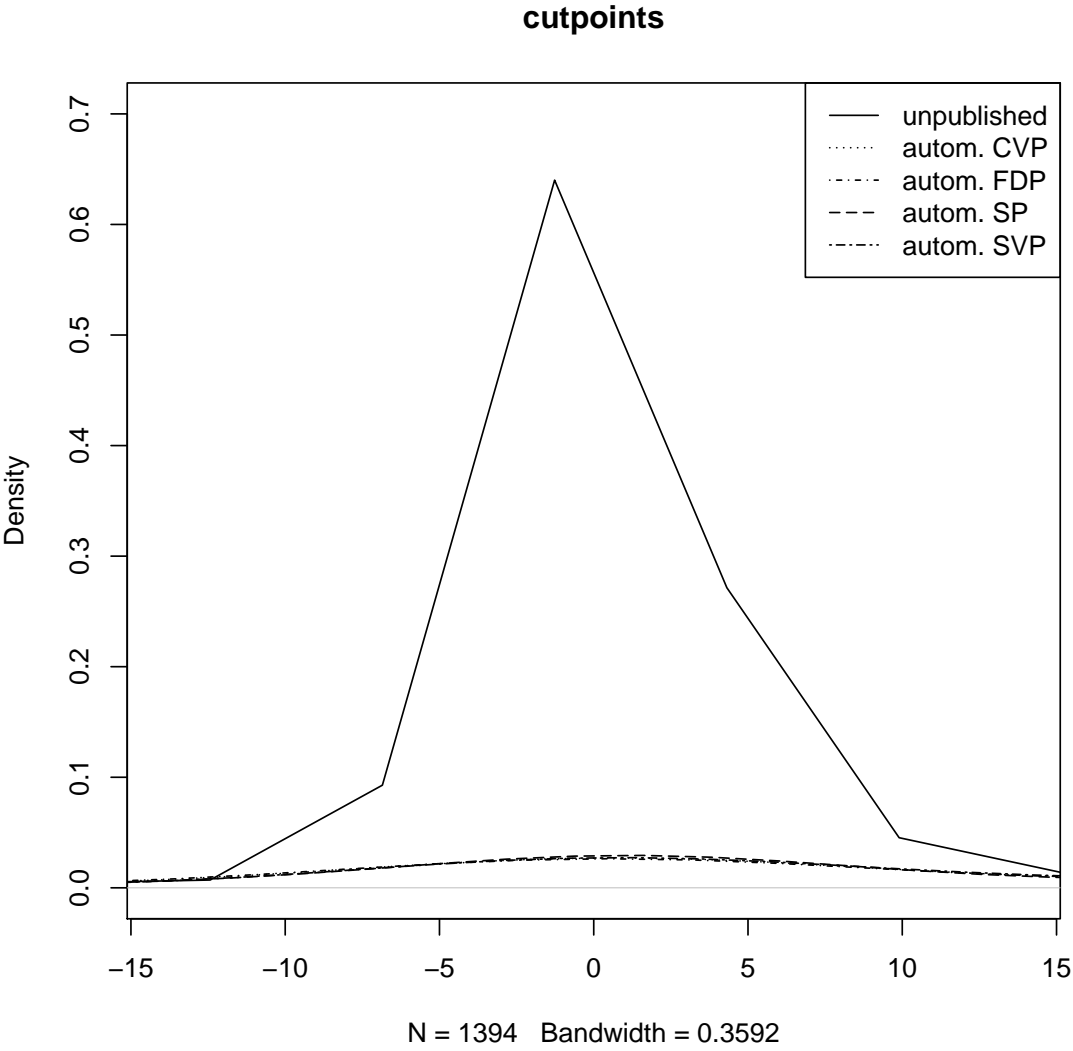
Figure 5: Effect of requested roll call votes on the four main party groups as a function of requester compared to automatic roll call votes (item difficulty parameter)





Obviously, these changes in the item difficulty parameters are difficult to assess and a more intuitive way to present our results are the effects on the cutpoints. Figure 6 depicts this information and shows that in automatically published votes the cutpoints are less equally distributed around 0 than in secret votes. More generally, for all main government parties the cutpoints shift slightly to the right in automatically published votes but vary much more dramatically.

Figure 6: Cutpoints in unpublished and automatic roll call votes



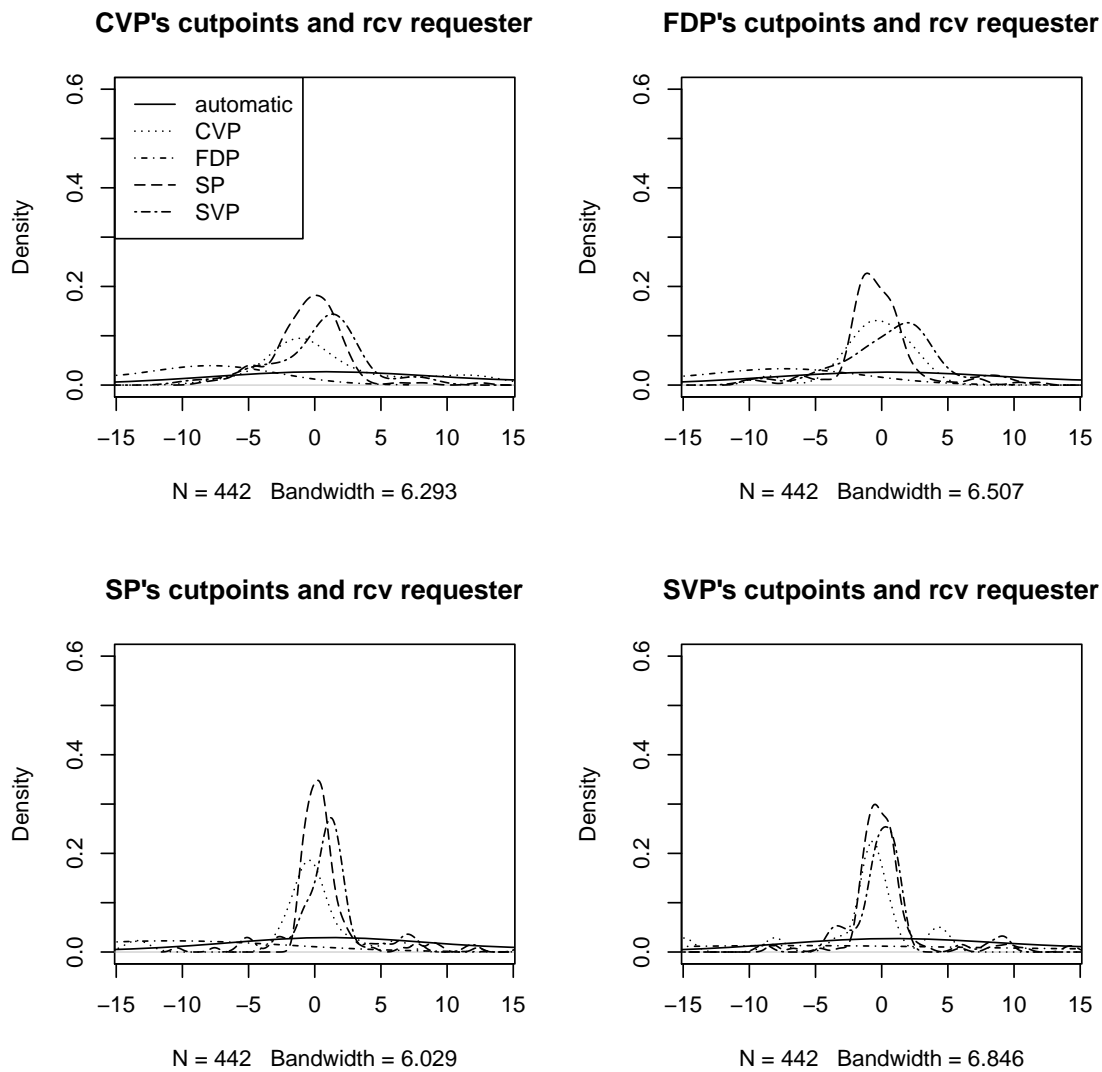
As we argued above requested roll call votes are likely to differ compared to the votes automatically published, amongst other, because a specific actor requests such a type of vote. In figure 7, which depicts for each of the four main government parties these changes in cutpoints as a function of who requests a roll call vote, confirms our expectations. In general, the cutpoints in requested roll call votes are much more centered around the value of 0 than the ones obtained for automatically published votes. Nevertheless there are some shifts to be observed. For the centrist CVP roll call vote requests by a centrist party (either CVP or FDP) shift the cutpoints slightly to the left. Given the distribution of ideal-points, this suggests that the CVP becomes more cohesive in such votes. On the other hand if the rightist SVP requests a roll call vote the cutpoints shift slightly to the right, implying a less unified voting record for the CVP. The cutpoints for votes requested by the SP are almost symmetrically distributed around the value of zero.

The cutpoints estimated for the FDP remain largely centered around zero if the centrist CVP requests a roll call vote. On the other hand, if the request comes from the SP or the FDP, the distribution shifts to left, implying a more cohesive party. Finally, requests by the rightist SVP shift the distribution of cutpoints to the right, implying that on average the FDP becomes less unified in its voting behavior.

Interesting are the patterns observed for the cutpoints for the SP. While in roll call votes requested by the CVP and the SP the cutpoints are distributed around the value of zero, the distributions move left, respectively right, if the FDP, respectively the SVP requests a roll call vote. Consequently, in these latter votes the SP becomes less, respectively more unified.

A similar pattern appears for the SVP. While cutpoints for roll call votes requested by the SP and the SVP are distributed centrally around zero, those for votes requested by the centrist CVP and FDP shift the cutpoints to the left. Consequently, in these latter votes the SVP appears to be more unified.

Figure 7: Cutpoints in automatic and requested roll call votes



## 5 Discussion

We motivated the analyses presented in this paper by arguing that MPs, when subject to scrutiny will vote differently than when their votes remain secret. We also argued that the effect of this scrutiny will depend on whether a (and which) party group requests a roll call vote. The results we presented above are largely in line with our arguments. MPs shift to the left in roll call votes and who requests a roll call vote affects parties differently.

In a narrow sense we can, however, not be sure that the leftward shift of MPs we observe in roll call votes is due to the increased scrutiny or other elements specific to the votes which are either automatically roll called or those subject to more scrutiny due to a request. Hug (2010) finds that roll call vote requests depend in part on the type of vote. Thus, votes dealing with parliamentary proposals are less likely to be roll called, while more procedural votes are more likely. Consequently, it might be the case that in votes on parliamentary proposals Swiss MPs position themselves more to the right, while in more procedural matters they shift to the left. In a strict sense we cannot refute this alternative explanation. We note, however, that the differences Hug (2010) reports are quite small, when they are converted into the inverse Mills ratio that he uses for addressing issues of selection bias. Consequently, there seems to be more going on than simply different types of votes leading to a more or less leftist parliament. Thus, while we cannot be sure that transparency is at work, we are quite certain that relying on roll call votes only gives us a different picture of MPs' ideal-points than when considering all votes in the Swiss lower house during the period we study. It might be, that in another period or in another parliament the difference in estimated ideal-points is not the same or even non-existent. This would, however, put into question a large literature on parliament that argues that transparency affects MPs etc. (see most notably Carey, 2009).

At the substantive level our results show that the leftist SP is a frequent requester of roll call votes. As in many instances the SP finds itself opposing the centrist and rightist parties, roll call vote requests may be considered as some sort of minority right. Similarly, that the rightist SVP is the second most frequent roll call vote requester in the period studied supports this assessment. As our discussion of the effects on cohesion indicates, requested roll call votes appear to have in many instances a disciplining effect. Again, this conclusion obviously in

a strict sense only holds for the Swiss lower house during the period studied.

## 6 Conclusion

Roll call votes are increasingly used to offer new insights based on advanced methodological tools. Often forgotten, however, is the fact that the underlying data comes about by a particular data-generating process. Except in the few parliamentary chambers where all votes are roll called and thus publicly available, either a rule or an actor's choice explain the publicity of a vote. Many authors have argued that MPs' voting decisions are influenced by a myriad of factors, most notably the possible influence of principals of the agent MP. This influence is likely to be stronger if the principal in question can observe the voting decision of an MP. Clearly, if a vote is public all principals from voters to parties and interest groups can hold an MP to account for his vote. Consequently, roll call data from parliaments carrying out all their business by roll call votes is likely to reflect these various influences in addition to an MP's policy positions.

In all other parliaments, there exist, potentially, different sets of voting information, some of which accessible, some of which inaccessible. It is exactly these types of datasets that could allow us to tease out the effect of various influences on MP behavior. The data from the Swiss lower house that we used in this paper allows us to do this. Using an IRT model in which ideal points are allowed to vary according to whether a vote is visible to all principals we can first demonstrate that these ideal-points vary considerably between public and secret votes. In the latter the MPs position themselves considerably to the right, while they shift leftward in the former votes.

We also find that in roll call votes the item difficulty parameters change in value for two parties, namely the two centrist parties, the CVP and the FDP. The two parties at the extremes, i.e., the SP and the SVP display on the other hand on average similar difficulty parameters in automatic roll call votes as in all other votes. When we considered only the roll call votes requested by one of the four main parties in parliament, we found that the FDP is considerably affected in its voting behavior if the leftist SP requests a roll call vote. Similarly, members of the rightist SVP change equally their behavior whenever their party or the CVP or SP requests a roll call vote.

These results, even though derived from a particular time period and a par-

particular parliamentary chamber, have wide-ranging consequences. Most notably, we were able to show that ideal-points estimated on the basis of roll call votes generate quite different results than those based on secret votes. In addition, we were able to show that the various parties are affected differently by the publicity of roll call votes and the identity of the requester of such a vote. Consequently, scholars using roll call data should be very attentive to the kinds of inferences they draw from their analyses based on observable roll call voting data. It seems especially important to consider the data-generating mechanism behind roll call votes when engaging in such analyses and inferences.

## Appendix

In figures 8, 9, and 10 we depict the results obtained for a model estimated with all votes, i.e., including also the roll call votes for which we could not identify the requesting party. As a quick and dirty convergence check we depict the density of the Geweke-statistics of all estimated parameters for the two models estimated for the analyses presented in the main text in figure 11.



Figure 8: Distribution of estimated ideal-points for the four main party groups (all unpublished, automatic and requested roll call votes)

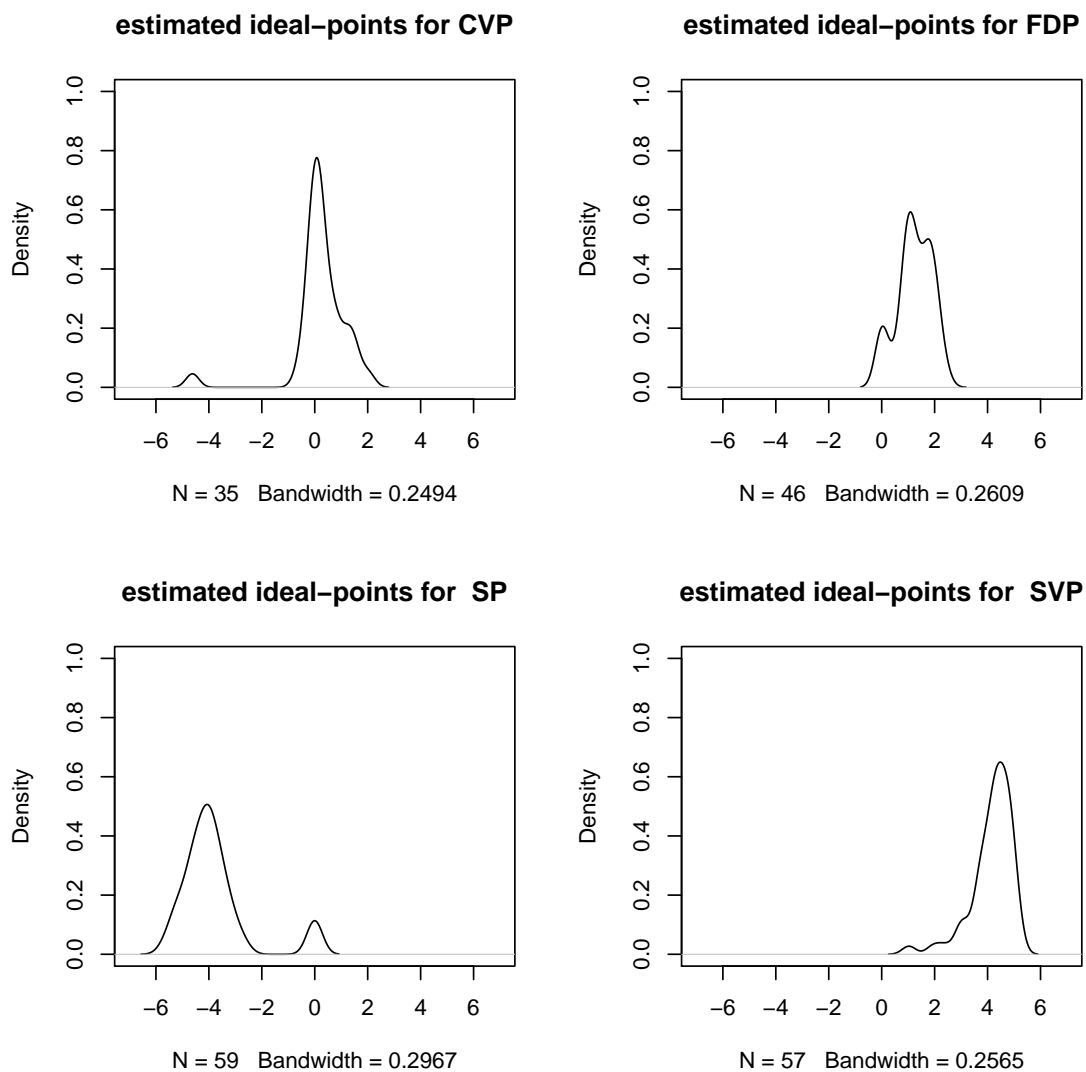


Figure 9: Estimated effect of roll call votes on the ideological positions of the members of the four main party groups (difference in ideal points, all unpublished, automatic and requested roll call votes)

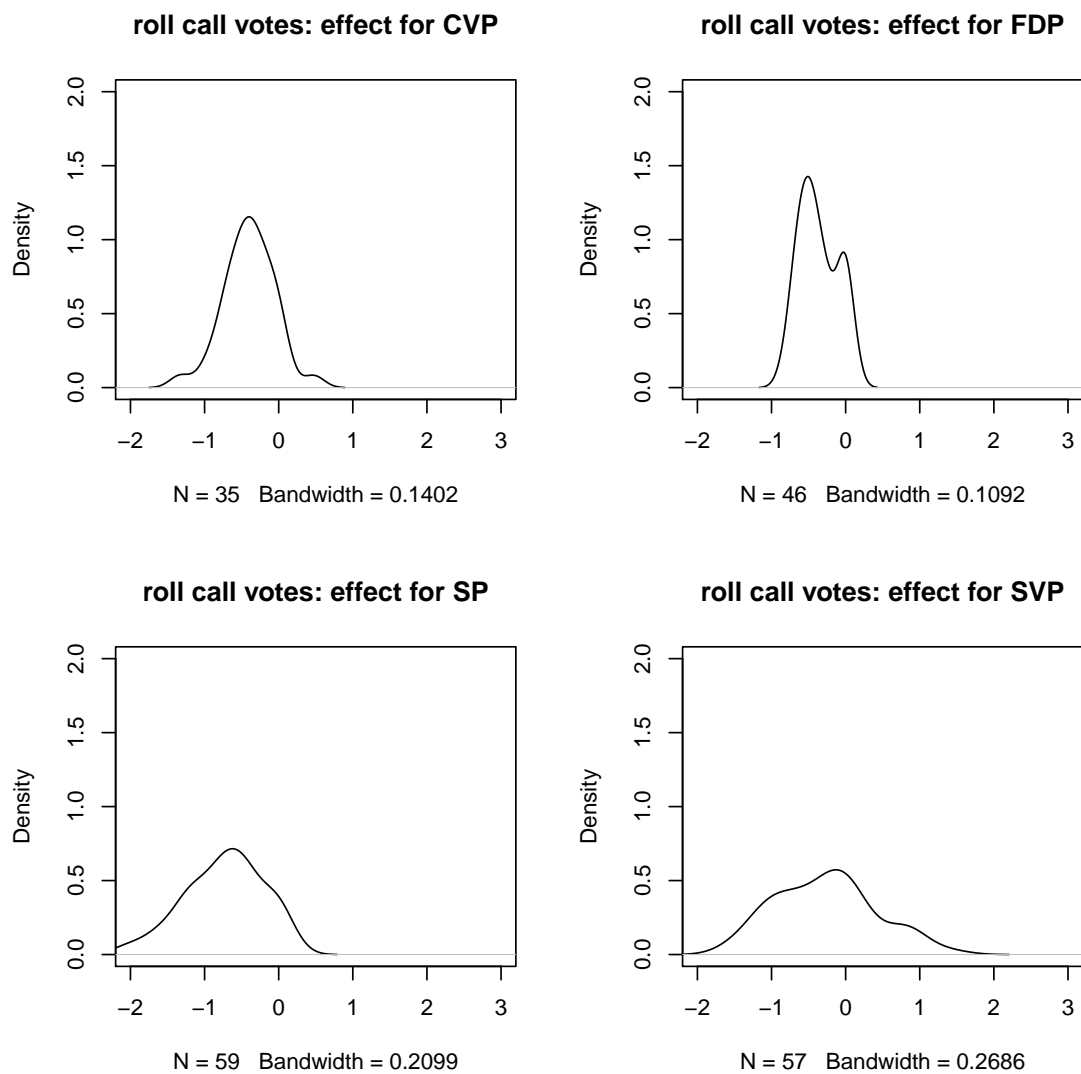


Figure 10: Distribution of estimated ideal-points for the four main party groups (all unpublished, automatic and requested roll call votes)

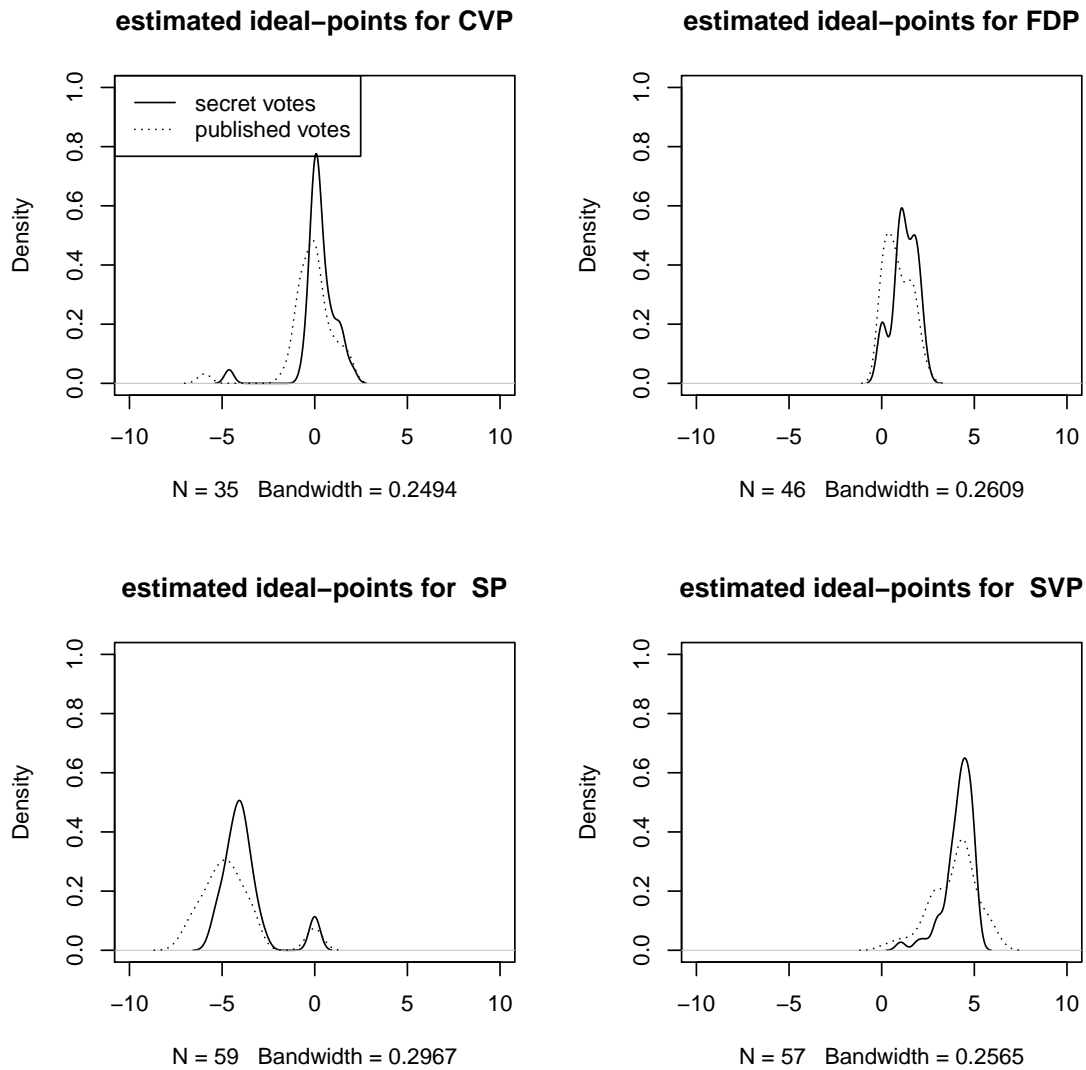
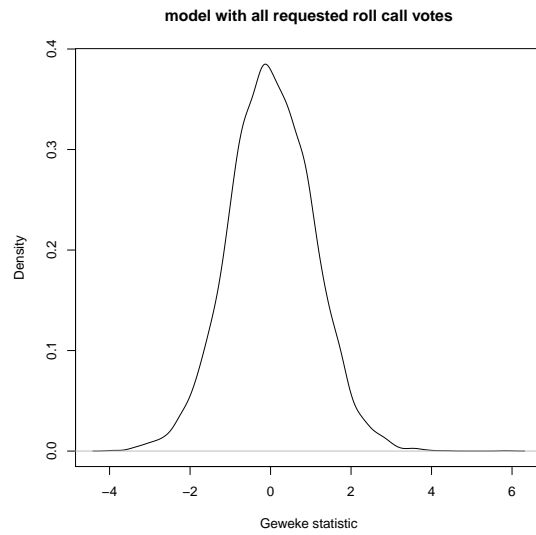
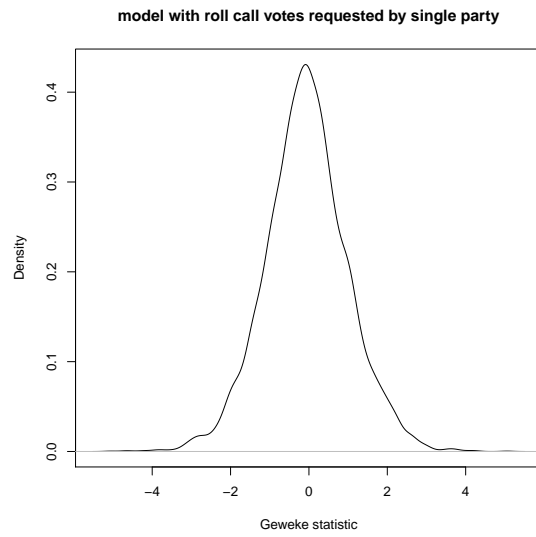


Figure 11: Distribution of Geweke-diagnostics over all estimated parameters



```

model{
### Party pressure model from Clinton et al. 2004 ppircv2.jag 1.9.2013
for(j in 1:up){ # Loop over unpublished votes
  for(i in 1:n){
    logit(pi[i,j]) <- beta[j]*theta[i] - alpha[j]
    y[i,j] ~ dbern(pi[i,j])
  }
}

for(j in (up+1):(up+pa)){ ## loop over automatic rcvs
  for(i in 1:n){
    logit(pi[i,j]) <- beta[j]*(theta[i] + gamma[i]) - alpha[j] -
      delta[j-up,1]*FCVP[i] - delta[j-up,2]*FFDP[i] - delta[j-up,3]*FSP[i] -
      delta[j-up,4]*FSVP[i]
    y[i,j] ~ dbern(pi[i,j])
  }
}

for(j in (up+pa+1):(up+pa+rr)){ ## loop over all requested rcvs
  for(i in 1:n){
    logit(pi[i,j]) <- beta[j]*(theta[i] + gamma[i]) - alpha[j] -
      delta[j-up,1]*FCVP[i] - delta[j-up,2]*FFDP[i] - delta[j-up,3]*FSP[i] -
      delta[j-up,4]*FSVP[i]
    y[i,j] ~ dbern(pi[i,j])
  }
}

## priors
for(i in 1:n){
  theta[i] ~ dnorm(0,1)
  gamma[i] ~ dnorm(0,1)
}

for(j in 1:(up+pa+rr)){
  alpha[j] ~ dnorm(0,1)
  beta[j] ~ dnorm(0,1)
}
for(j in 1:(pa+rr)){
  for(i in 1:4){
    delta[j,i] ~ dnorm(0,1)
  }
}
}

```

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