Online Appendix for "Peer Effects in Legislative Voting"

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September 2018

A Standard error calculations

There are two main issues we confront in the correlation structure of our data. First, the existence of seating-based peer effects (and/or effects of having similar last names) imply that behavior may be correlated across MEPs sitting next to each other. If we define clusters based on groupings of closely seated MEPs (such as rows), this becomes a standard clustering problem, in which voting behavior is correlated across MEPs within each cluster. Second, our data is dyadic, so that an observation in our data reflects the behavior of *a pair* of individuals during voting on a given proposal rather than a single individual. On its own this implies a mechanical correlation across all pairs in our data which have a member in common. Combined with the clustering issue, this further implies that there may be a correlation across two pairs in our data as soon as one member from each of the pairs are seated close together and belong to the same cluster.

To deal with these issues we use dyadic cluster-robust standard errors throughout (Cameron and Miller (2014) and Aronow et al. (2015)). In standard regression notation, let x_{ijt} be the vector of (exogenous) regressors (and instruments), let $\hat{e}_{ijt}$ be the regression residuals and let $\rho(i,t)$ denote the cluster to which MEP i belongs during a vote on proposal t. Let $\mathbf{1}[\cdot]$ denote the standard indicator function. We then estimate the covariance matrix of our OLS or 2SLS regressions by replacing the inner part of the standard (Huber-Eicker-White) sandwich estimator by:

$$\sum_{i,j,t} \sum_{i',j',t'} I(i,j,t;i',j',t') e_{ijt} e_{i'j't'} x_{ijt} x'_{i'j't'}.$$

*We thank the editor, David Deming, for helpful suggestions. We thank seminar participants at the University of Copenhagen, the 2014 DAEiNA meeting and the 2017 European meeting of the Econometric Society for helpful comments. We thank Sebastian Barfort and Session Services at the European Parliament for help with data collection. The University of Chicago Booth School of Business provided financial support.

Here $I(i, j, t; i', j', t')$ is an indicator for whether any of the MEPs in the observation ijt and the observation $i'j't'$ belong to the same cluster, formally:

$$I(i, j, t; i', j', t') \equiv \mathbf{1}\Big[\rho(i, t) = \rho(i', t') \vee \rho(j, t) = \rho(j', t') \vee \rho(i, t) = \rho(j', t') \vee \rho(i', t') = \rho(j, t)\Big].$$

Our implementation of the estimator closely follows the recommendations in Cameron and Miller (2014). In particular, we apply a degree-of-freedom correction $\frac{G}{G-1}\frac{N-1}{N-k}$, where G is the number of clusters, N is the total number of observations, and k is the number of estimated regression coefficients, and use eigenvector decomposition to deal with non-positive semi-definite variance matrices in finite samples.[1]

In implementing our analysis, we define a cluster to be a row-by-EP-by-EPG. One example of a cluster in our data is thus "the 9th row of the Greens-European Free Alliance Group during the 6th parliamentary term". By choosing this level of clustering, we allow for arbitrary correlation within each row of each EPG in each of the two parliamentary terms we analyze.[2]

B Peer effects by MEP characteristics, additional results

This section presents some additional results regarding heterogeneous peer effects. First, we revisit heterogeneity in terms of gender mix and shared country of origin by showing results where the sample is split either by gender mix or shared country of origin (as opposed to splitting the sample in both dimensions at once). Tables A.1 and A.2 show the results. The conclusions are generally similar to those presented in the main text, however, we note that we do not see much evidence of a peer effect among MEPs not from the same country when these are treated as one group and not split out by gender mix.

Second, we examine whether peer effects are stronger among seating neighbors who are similar in terms of observable characteristics beyond those emphasized in the main text. For brevity, we focus only on reduced form ITT estimates here. For a given pair characteristic C_{ij} we obtain heterogeneous ITT estimates from the interaction term in the following equation:

[1] One practical issue with the dyadic-cluster robust variance estimator is that it is not guaranteed to be positive semi-definite in finite samples. In our main analysis, there is only one specification in which the relevant part of the estimated covariance matrix is not positive semi-definite (Column (6) in Panel B of Table 3) and in the appendix tables there are four (Column (4)-(7) o Table A.6). Following Cameron and Miller (2014), we simply correct this by setting negative eigenvalues to zero in the eigenvalue decomposition of the estimated matrix.

[2] A practical complication arises due to differences in layouts across the two venues where the EP meets. Because the Brussels layout spreads the MEPs out over more rows than the Strasbourg layout, many MEPs do not sit on the same row number in both of the venues. Rather than having these MEPs switch clusters every time the EP changes venue, we always assign all MEPs to their Strasbourg row number when calculating standard errors. More than 80 percent of the voting in our data takes place in Strasbourg. Moreover, since the rows in Strasbourg are wider, this approach is conservative in the sense that it implies a coarser level of clustering.

$$Disagree_{ijt} = \kappa_0 + \kappa_1 NameAdjacent_{ijt} + \kappa_2 NameAdjacent \times C_{ij} + \kappa_3 C_{ij} + \nu_{ijt}. \tag{1}$$

The characteristics we focus on are: whether members of the MEP pair have an education of similar quality (as measured by an indicator for having a degree from a "top 500" university), their age difference in years, their difference in EP tenure in years, and whether one or both members of the pair are freshmen. Table A.3 shows the corresponding results. Throughout the table, the coefficients on the interaction terms are small and never statistically significant. We see no evidence that peer effects vary by any of these characteristics.

Table A.1: Peer effects by same country of origin

SAMPLE:	From different countries		From same country	
	(1) Disagree OLS	(2) Disagree 2SLS	(3) Disagree OLS	(4) Disagree 2SLS
Name adjacent	-0.0037 (0.0024)		-0.0126*** (0.0040)	
Seat neighbors		-0.0046 (0.0031)		-0.0150*** (0.0049)
Day-level fixed effects	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	Yes	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes	Yes
Observations	98,929,602	98,929,602	8,395,408	8,395,408
Clusters	76	76	76	76
Disagree mean	0.0896	0.0896	0.0378	0.0378
Implied persuasion rate	0.0413	0.0513	0.3333	0.3968
F-stat		860.4		1053

Observations for the presented regression results are proposals-by-MEP pairs from the main analysis sample. Different columns correspond to different subsamples of MEP pairs. In Columns (1) and (2), the sample only includes MEP pairs from different countries. In Columns (3) and (4), the sample only includes MEP pairs from the same country. In all columns, the outcome variable is an indicator variable denoting whether the MEP pair cast different votes on the proposal. *Name adjacent* is an indicator for whether members of the MEP pair are immediately adjacent in the alphabetical ordering of surnames within their seating section (the non-leadership section of their EPG). *Seat neighbors* is an indicator for whether the MEP pair is seated adjacently. In addition to day-level and EP-by-EPG fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Estimates in Columns (1) and (3) were obtained via OLS. Estimates in Columns (2) and (4) were obtained using 2SLS, using the indicator for whether members of the MEP pair are immediately adjacent in the alphabetical ordering of surnames within their seating section to instrument for whether the MEP pair is seated adjacently (the same sets of name similarity controls are employed in the first stage estimation). Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary-term. The number of such clusters is listed in the bottom section of the table. The persuasion rate implied by the estimated peer effect is based on DellaVigna and Gentzkow (2010). The listed F-statistics in the 2SLS columns correspond to the first-stage F-statistic measure of instrument strength proposed by Stock and Yogo (2005). *** p<0.01, ** p<0.05, * p<0.11

Table A.2: Peer effects by gender mix

SAMPLE:	Two women		One woman, one man		Two men	
	(1) Disagree OLS	(2) Disagree 2SLS	(3) Disagree OLS	(4) Disagree 2SLS	(5) Disagree OLS	(6) Disagree 2SLS
Name adjacent	-0.0130*** (0.0037)		-0.0025 (0.0025)		-0.0034 (0.0047)	
Seat neighbors		-0.0162*** (0.0043)		-0.0031 (0.0031)		-0.0043 (0.0059)
Day-level fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,139,566	15,139,566	48,575,162	48,575,162	43,610,282	43,610,282
Clusters	68	68	76	76	71	71
Disagree mean	0.0756	0.0756	0.0830	0.0830	0.0918	0.0918
Implied persuasion rate	0.1720	0.2143	0.0301	0.0373	0.0370	0.0468
F-stat		249.5		722.5		755

Observations for the presented regression results are proposals-by-MEP pairs from the main analysis sample. Different columns correspond to different subsamples of MEP pairs. In Columns (1) and (2), the sample only includes all-women MEP pairs. In Columns (3) and (4), the sample only includes mixed-gender MEP pairs. In Columns (5) and (6), the sample only includes all-male MEP pairs. In all columns, the outcome variable is an indicator variable denoting whether the MEP pair cast different votes on the proposal. *Name adjacent* is an indicator for whether members of the MEP pair are immediately adjacent in the alphabetical ordering of surnames within their seating section (the non-leadership section of their EPG). *Seat neighbors* is an indicator for whether the MEP pair is seated adjacently. In addition to day-level and EP-by-EPG fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Estimates in Columns (1), (3), and (5) were obtained via OLS. Estimates in Columns (2), (4), and (6) were obtained using 2SLS, using the indicator for whether members of the MEP pair are immediately adjacent in the alphabetical ordering of surnames within their seating section to instrument for whether the MEP pair is seated adjacently (the same sets of name similarity controls are employed in the first-stage estimation). Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary-term. The number of such clusters is listed in the bottom section of the table. The persuasion rate implied by the estimated peer effect is based on DellaVigna and Gentzkow (2010). The listed F-statistics in the 2SLS columns correspond to the first-stage F-statistic measure of instrument strength proposed by Stock and Yogo (2005). *** $p<0.01$, ** $p<0.05$, * $p<0.11$

Table A.3: Heterogeneous peer effects in other dimensions

	(1) Disagree	(2) Disagree	(3) Disagree	(4) Disagree
Name adjacent	-0.0054*	-0.0051**	-0.0045*	-0.0043
	(0.0030)	(0.0024)	(0.0026)	(0.0059)
Same quality education	-0.0037***			
	(0.0013)			
Name adj. X Same quality education	0.0009			
	(0.0027)			
Age difference		0.0016		
		(0.0012)		
Name adj. X Age difference		0.0004		
		(0.0014)		
Tenure difference			0.0009	
			(0.0023)	
Name adj. X Tenure difference			-0.0006	
			(0.0019)	
One freshman				0.0002
				(0.0016)
Two freshmen				-0.0019
				(0.0035)
Name adj. X One freshman				-0.0014
				(0.0066)
Name adj. X Two freshmen				0.0006
				(0.0049)
Day-level fixed effects	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	Yes	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes	Yes
Observations	107,325,010	107,325,010	107,325,010	107,325,010
Clusters	76	76	76	76
p-value, significance of interaction terms				0.972

Observations for the presented regression results are proposals-by-MEP pairs in the main analysis sample. In all columns, the outcome variable is an indicator variable denoting whether the MEP pair cast different votes on the proposal. *Name adjacent* is an indicator for whether members of the MEP pair are immediately adjacent in the alphabetical ordering of surnames within their seating section (the non-leadership section of their EPG). The following variables and their interactions with *Name adjacent* are added in various columns: an indicator for whether the two MEPs have the same education quality as measured by whether both or neither MEPs have a degree from a top 500 university, the age difference between the two MEPs, the difference in EP tenure between the two MEPs, and indicators for whether one or both of the MEPs in the pair is a freshman. In addition to day-level and EP-by-EPG fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary term. The number of such clusters is shown in the table. *** p<0.01, ** p<0.05, * p<0.1

C Differences in peer effects by country alignment

We examine whether peer effects differ depending on whether politicians are ex ante more or less aligned on a given proposal. On the one hand, peers who are far apart on an issue might exert a stronger influence on each other. Alternatively, if the ex ante disagreement is too large, it might prevent peers from influencing one another at all. To construct a measure of the ex ante position of MEPs on a given proposal, we proxy individual MEPs' positions by the overall position of their home country since, as noted in Section 3.2, national interests and pressure from national parties are an important determinant of MEPs' voting behavior.[3] To construct a proxy for national positions on each proposal, we rely on the voting behavior of MEPs excluded from the main analysis sample (i.e., leaders and MEPs from non-alphabetical parties).[4] For each country and each proposal, we define a country to be *in favor* of a given proposal if at least 90 percent of its MEPs voted in favor of the proposal among MEPs not in the main analysis sample. Similarly, we define a country to be *against* a given proposal if less than 40 percent of its MEPs voted in favor. Otherwise, we say that a country is *neutral* on a given proposal. These cutoffs were chosen in order to split the sample roughly evenly. Under these definitions, 32 percent of country-proposals are coded as in favor, 29 percent are against, and 39 percent are neutral.[5] To reduce mismeasurement, we drop all country-proposal pairs in which the country has less than 10 participating MEPs among the leaders and non-alphabetically seated parties.

Focusing on the subsample of MEP pairs that are from different countries, Table A.4 repeats our main analysis depending on the country positions of the MEPs' home countries. Since we employ a subsample — we drop same-country MEP pairs and country-proposal pairs with too few MEPs participating — we first show in Columns (1) and (2) that the estimated peer effects from Table 4 do not change substantially in this subsample.

The next six columns show ITT and LATE estimates of peer effects for proposals where the MEPs' home countries are aligned (Columns (3) and (4)), where one country is neutral but the other is not (Columns (5) and (6)) and where the two countries are opposed (Columns (7) and (8)). Looking across the columns the estimated peer effects are very similar, although they are

[3]Party affiliation is much more predictive of vote concordance than home country or any other MEP characteristic, as evidenced by the high rate of agreement among our (within-party) MEP pairs. Because our analysis focuses on within-party concordance, it is natural to focus on MEPs' home country interests as a source of variation in a vote's importance to an MEP.

[4]We obtain similar results if we use the full set of MEPs to generate the proxy for national interest.

[5]Reassuringly, the resultant measure of country interest is a strong predictor of voting behavior in our main analysis sample. Unconditionally, MEPs are 30.2 percentage points more likely to vote yes on a proposal if their home country is *in favor* relative to if they are *neutral* and are 54.3 percentage points less likely to vote yes if their home country is *against* rather than neutral. After controlling for party-by-proposal fixed effects, MEPs are 9.5 percentage points more likely to vote yes if their home country is *in favor* and 19.1 percentage points less likely to vote yes if their home country is *against*.

only statistically significant when the countries are aligned. When it comes to the absolute peer effect, therefore, there is little evidence that the strength of the seating peer effects varies with home country positions.

If we focus on relative effects or persuasion rates, however, we see a different picture. Unsurprisingly, for proposals in which the MEPs' home countries are aligned, MEPs are much more likely to agree regardless of seating. The baseline disagreement rate for these proposals is only 5.3 percent, whereas it is much higher for other proposals. As a result, our LATE estimates imply that seating peer effects have a persuasion rate (or relative effect) of 12 percent for proposals in which home countries are aligned, whereas the persuasion rate is only 3.2 percent when one country is neutral and 0.1 percent when countries are not aligned.[6] To the extent that we care more about persuasion rates, the results thus indicate that peer effects are stronger when politicians are ex ante not in too strong disagreement with each other.

[6] Converted to relative effects, the confidence intervals from Columns (6) and (8) allow us to rule out persuasion rates higher than 9.5 percent when one country is neutral and 4.9 percent when countries are opposed (note that the large number of votes in the samples implies that the uncertainty on the baseline disagreement rate is negligible).

Table A.4: Peer effects by home country positions

SAMPLE:	Full subsample		Countries aligned		One country neutral		Countries opposed	
	(1) Disagree OLS	(2) Disagree 2SLS	(3) Disagree OLS	(4) Disagree 2SLS	(5) Disagree OLS	(6) Disagree 2SLS	(7) Disagree OLS	(8) Disagree 2SLS
Name adjacent	-0.0041 (0.0026)		-0.0050*** (0.0018)		-0.0037 (0.0038)		-0.0063 (0.0101)	
Seat neighbors		-0.0053 (0.0033)		-0.0064*** (0.0023)		-0.0048 (0.0049)		-0.0080 (0.0131)
Day-level fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	71,870,700	71,870,700	47,621,572	47,621,572	23,422,403	23,422,403	826,725	826,725
Clusters	74	74	74	74	74	74	70	70
Disagree mean	0.0919	0.0919	0.0526	0.0526	0.1510	0.1510	0.6858	0.6858
Implied persuasion rate	0.0446	0.0577	0.0951	0.1217	0.0245	0.0318	0.0092	0.0117
F-stat		648.8		601.9		709.8		443.2

Observations for the presented regression results are proposals-by-MEP pairs from the main analysis sample, excluding MEP pairs that are from the same country as well as country-by-proposal pairs where the country has too few participating MEPs to reliably determine the national position (fewer than 10 MEPs participating among the group of leaders and alphabetically seated parties). Columns (1) and (2) includes all such observations, while the remaining columns correspond to different subsamples based on the configuration of home country positions. Columns (3) and (4) only include observations where the home countries' positions are the same. Columns (5) and (6) only include observations where one home country is neutral but the other is not. Columns (7) and (8) only include observations where one home country is against and the other is in favor. In all columns, the outcome variable is an indicator variable denoting whether the MEP pair cast different votes on the proposal. *Name adjacent* is an indicator for whether members of the MEP pair are immediately adjacent in the alphabetical ordering of surnames within their seating section (the non-leadership section of their EPG). *Seat neighbors* is an indicator for whether the MEP pair is seated adjacently. In addition to day-level and EP-by-EPG fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Estimates in Columns (1), (3), (5), and (7) were obtained via OLS. Estimates in Columns (2), (4), (6), and (8) were obtained using 2SLS, using the indicator for whether members of the MEP pair are immediately adjacent in the alphabetical ordering of surnames within their seating section to instrument for whether the MEP pair is seated adjacently (the same sets of name similarity controls are employed in the first-stage estimation). Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary-term. The number of such clusters is listed in the bottom section of the table. The persuasion rate implied by the estimated peer effect is based on DellaVigna and Gentzkow (2010). The listed F-statistics in the 2SLS columns correspond to the first-stage F-statistic measure of instrument strength proposed by Stock and Yogo (2005). *** p<0.01, ** p<0.05, * p<0.1

D Peer effects at longer distances

Throughout the main text, we estimate seating peer effects only between immediate seat neighbors. However, peer effects could, in principle, also operate between MEPs sitting further apart. We can define indicator variables to denote whether two MEPs are sitting 2, 3 or 4 seats apart ($Seated2Apart_{ijt}$, $Seated3Apart_{ijt}$, $Seated4Apart_{ijt}$). To test for the existence of more distant peer effects, we consider regressions of the following form:

$$\begin{aligned} Disagree_{ijt} &= \pi_0 + \pi_1 SeatNeighbors_{ijt} + \pi_2 Seated2Apart_{ijt} + \pi_3 Seated3Apart_{ijt} \\ &\quad + \pi_4 Seated4Apart_{ijt} + \varsigma_{ijt}. \end{aligned} \tag{2}$$

As in our main analysis, we use an IV strategy to deal with the sorting of MEPs and use as instruments a set of indicators for whether the MEPs are 2, 3, or 4 apart in the alphabetical ranking of last names within their section ($Names2Apart_{ijt}$, $Names3Apart_{ijt}$, $Names4Apart_{ijt}$).

Table A.5 shows the estimated peer effects when we include indicators for sitting 1, 2, 3, or 4 seats apart. Columns (1)–(4) present reduced form OLS estimates in which we simply replace the endogenous variables by the relevant instruments, while Columns (5)–(8) present 2SLS estimates. In both sets of columns the estimated effect of being immediate neighbors is virtually unchanged from the specification in the main text, while the estimated effects of being 2, 3, or 4 apart are very close to zero and in fact positive. Because standard errors increase when we include the additional variables, however, none of the estimated effects are statistically significant on their own when we include more than one seating variable. As shown at the bottom of the table, however, the seating variables are jointly significant in all specifications, and we can always reject that being immediate neighbors has the same effect as being more distant neighbors.[7] Overall, we conclude that peer effects operate only among immediate neighbors.

[7] Intuitively, the reason that the coefficient on being immediate neighbors is not significant on its own is that we cannot rule out the (somewhat pathological) case where there are no peer effects among immediate neighbors but are large peer effects among more distant neighbors.

Table A.5: Peer effects at longer distances

	(1) Disagree OLS	(2) Disagree OLS	(3) Disagree OLS	(4) Disagree OLS	(5) Disagree 2SLS	(6) Disagree 2SLS	(7) Disagree 2SLS	(8) Disagree 2SLS
Name adjacent	-0.0048**	-0.0046	-0.0045	-0.0043				
	(0.0024)	(0.0031)	(0.0036)	(0.0040)				
Names 2 apart		0.0005	0.0005	0.0007				
		(0.0018)	(0.0023)	(0.0027)				
Names 3 apart			0.0002	0.0004				
			(0.0016)	(0.0019)				
Names 4 apart				0.0005				
				(0.0015)				
Seat neighbors					-0.0060**	-0.0057	-0.0056	-0.0054
					(0.0030)	(0.0038)	(0.0044)	(0.0050)
Seated 2 apart						0.0009	0.0009	0.0012
						(0.0025)	(0.0030)	(0.0035)
Seated 3 apart							0.0003	0.0004
							(0.0023)	(0.0027)
Seated 4 apart								0.0009
								(0.0026)
Day-level fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	107,325,010	107,325,010	107,325,010	107,325,010	107,325,010	107,325,010	107,325,010	107,325,010
Clusters	76	76	76	76	76	76	76	76
p-value, coefficients zero		0.001***	0.003***	0.002***		0.002***	0.004***	0.003***
p-value, coefficients are equal		0.003***	0.004***	0.012**		0.002***	0.007***	0.014**
F-stat: Seat neighbors					958.3	1001	540	393.4
F-stat: Seated 2 apart						661	372.2	629.5
F-stat: Seated 3 apart							228.9	179.6
F-stat: Seated 4 apart								135.5

Observations for the presented regression results are proposals-by-MEP pairs in the main analysis sample. In all columns, the outcome variable is an indicator variable denoting whether the MEP pair cast different votes on the proposal. The listed regressors are indicators for whether the MEP pair is 1, 2, 3, and 4 seats apart in the alphabetical ordering of MEPs within their seating section (the non-leadership section of their EPG), as well as indicator for whether the MEP pair is seated 1, 2, 3, and 4 seats apart. In addition to day-level and EP-by-EPG fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Estimates in Columns (1)–(4) were obtained via OLS. Estimates in Column (5)–(8) were obtained using 2SLS, using the namel adjacency variables as instruments for the seating variables. Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary term. The number of such clusters is shown in the table. The listed F-statistics in the 2SLS column correspond to Sanderson and Windmeijer (2016)'s "conditional first stage F-statistic" measures of instrument strength under multiple endogenous variables, except in Column (5), where it correspond to the first-stage F-statistic measure of instrument strength proposed by Stock and Yogo (2005) for the case of a single endogenous variable. *** p<0.01, ** p<0.05, * p<0.1

E Alternative placebo test

In conducting our placebo test on the sample of EPG leaders in Panel A of Table 5 we defined name adjacency in terms of whether a pair of leadership MEPs were adjacent in the alphabetical ranking of names within their group of leaders. This definition of $NameAdjacent_{ijt}$ exactly mirrors the one used in the main analysis sample in the sense that it focuses on alphabetical adjacency within the group of MEPs who are sitting together (leaders or non-leaders). Because there are markedly fewer leaders than non-leaders, however, one might be concerned that name adjacency in the group of leaders is a weaker correlate of name similarity. To see why this is so, consider the extreme case in which there are only two MEPs in the leadership group of some EPG. These two MEPs will be name adjacent regardless how similar their surnames actually are. Conversely, if the size of a group of MEPs tends to infinity, a pair of MEPs will be name adjacent within that group only if their surnames are virtually identical.

To check whether such differences in group size affect the conclusions of our placebo test, Table A.6 repeats the placebo test from Panel A of Table A.6 using a different measure of name adjacency. Instead of defining a pair of leaders as being name adjacent if they are next to each other in the alphabetical ordering of leaders, we define them as being name adjacent only if they are next to each other in the alphabetical ordering of *all* MEPs within their EPG. Results are very similar to those presented in the main text. The alternative measure of name adjacency does not predict seating and also does not correlate with voting similarity. In all specifications, we can reject that name similarity reduces disagreement by more than 0.6 percentage points.

Table A.6: Leadership placebo test, alternative name adjacency definition

	(1) Seat neighbors	(2) Seat neighbors	(3) Disagree	(4) Disagree	(5) Disagree	(6) Disagree	(7) Disagree
Name adjacent, full party	0.0393	0.0013	0.0005	0.0044	0.0042	0.0038	0.0036
	(0.0279)	(0.0322)	(0.0030)	(0.0036)	(0.0033)	(0.0042)	(0.0047)
Day-level fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	No	Yes	No	Yes	Yes	Yes	Yes
Baseline name controls	No	Yes	No	Yes	Yes	Yes	Yes
Observable pair characteristics	No	Yes	No	Yes	No	No	Yes
Additional name similarity controls	No	Yes	No	No	No	Yes	Yes
Additional name rank gap controls	No	Yes	No	No	No	No	Yes
Observations	18,772,462	18,772,462	18,772,462	18,772,462	18,772,462	18,772,462	18,772,462
Clusters	69	69	69	69	69	69	69

Observations in the presented regression results are proposals-by-MEP pairs. The regressions include all observations in which both MEPs are leaders of the same alphabetically seated EPG. The outcome variable in Columns (1) and (2) is an indicator for whether the MEP pair is seated adjacently, and in Columns (3)–(7) it is an indicator for whether the MEP pair cast different votes on the proposal. *Name adjacent, full party* denotes whether the MEP pair is immediately adjacent in the alphabetical ordering of surnames within their EPG. "Baseline name controls" are comprised of an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. "Observable pair characteristics" include controls for whether the two MEPs are from the same country, have the same education quality, have the same freshman status, their age difference, and their difference in EP tenure. "Additional name similarity controls" include the cubic polynomials in Bigram-Jaccard and Levensthein name similarity, as well as the indicator variable for whether the names sound alike under the SoundEX algorithm. "Additional name rank gap controls" are indicators for every 10-seat bin in the "overall name rank gap" variable (as described in the main text). Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary term. The number of such clusters is shown in the table. *** p<0.01, ** p<0.05, * p<0.1

F Peer effects across parties

In the main text, we estimate peer effects among MEPs from the same party. Peer effects could also operate across party lines, however. Although our empirical strategy leverages random assignment of seats within EPGs, we can adapt our data and specification to examine whether we see evidence of seating peer effects across EPGs as well. In particular, there are MEPs in our data who are assigned to seats at the edge of their EPGs' sections and hence will be seated next to MEPs from other parties.

To examine cross-party peer effects, we take the sample of non-leadership MEPs from alphabetically seated EPGs and form all possible pairs of MEPs and proposals in which both MEPs are present and participate in the vote, and where the two MEPs are from *different* EPGs. Letting ij index MEP pairs and t index proposal, we define the variables $Disagree_{ijt}$ and $SeatNeighbors_{ijt}$ as in the main analysis and consider the following regression:

$$Disagree_{ijt} = \psi_0 + \psi_1 SeatNeighbors_{ijt} + \iota_{ijt}. \tag{3}$$

The coefficient ψ_1 measures whether MEPs from different parties who sit next to each other are less likely to disagree, relative to MEP pairs from different parties who do not sit adjacently. To deal with systematic sorting into seats, we instrument $SeatNeighbors_{ijt}$ by predicted adjacency based only on the alphabetical name rankings and seat layouts for each EPG and each day. In addition, to address possible differences in typical agreement across EPGs we include party-pair-by-EP-term fixed effects, as well as our baseline set of name controls. Table A.7 shows the results. Column (1) shows the first stage regression for the predicted seating instrument, Columns (2) shows the reduced form (ITT) estimate, and Column (3) shows LATE estimates using 2SLS. The estimates show little indication that peer effects operate across parties, as both the ITT and LATE estimates are in fact positive. Because standard errors are also quite large, however, our results do not rule out that cross-party peer effects may be non-trivial. For the LATE estimate in Column (3), the 95 percent confidence interval does not allow us to reject the possibility that seat adjacency reduces disagreement by 1.1 percentage points, corresponding to a persuasion rate of 3.6 percent. This lack of precision reflects the relative rarity of MEPs that sit on the edge of their parties' sections (0.02 percent of the sample) and the relatively low predictability of alphabetical seating on cross-party adjacency (since a single out-of-order MEP affects the ordering of all row-end MEPs).

Table A.7: Peer effects across parties

	(1) Seat neighbors OLS	(2) Disagree OLS	(3) Disagree 2SLS
Seat neighbors, predicted	0.2796***	0.0023	
	(0.0455)	(0.0028)	
Seat neighbors			0.0082
			(0.0098)
Day-level fixed effects	Yes	Yes	Yes
EP-by-EPG-pair fixed effects	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes
Observations	212,057,965	212,057,965	212,057,965
Clusters	76	76	76
Disagree mean		0.307	0.307
F-stat			104.7

Observations for the presented regression results are proposals-by-MEP pairs. The sample only includes MEP pairs who are from two different alphabetically seated parties and where both MEPs are non-leaders. The outcome variable in Columns (1) is an indicator for whether the MEP pair is seated adjacently. In Columns (3) and (4), the outcome variable is an indicator denoting whether the MEP pair cast different votes on the proposal. The listed regressors are indicators for whether the MEP pair is seat neighbors and for whether the MEP pair is *predicted* to be seat neighbors. *Predicted* seating refers to what would have occurred if there had been perfect compliance with the alphabetical seating rule. In addition to day-level and EP-by-EPG-pair fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Estimates in Columns (1) and (2) were obtained via OLS. Estimates in Column (3) were obtained using 2SLS, using the the predicted seat neighbor indicator as instruments for the actual seat neighbor variable. Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary-term. The number of such clusters is listed in the bottom section of the table. The listed F-statistics in the 2SLS column correspond to Sanderson and Windmeijer (2016)'s "conditional first stage F-statistic" measures of instrument strength under multiple endogenous variables. *** p<0.01, ** p<0.05, * p<0.1

G First stage regressions when exploiting venue variation

Table A.8 shows the first-stage regressions corresponding to Table 6. We note that all of the predicted seating variables have predictive power in all of the first-stage specifications. At the same time, however, each of the predicted seating variables is a particularly strong predictor of its non-predicted counterpart (i.e., $SeatNeighborsPredicted_{ijt}$ is a particularly strong predictor of $SeatNeighbors_{ijt}$, while $SeatNeighborsPreviousVenuePredicted_{ijt}$ is a particularly strong predictor of $SeatNeighborsPreviousVenue_{ijt}$). This ensures that we have enough independent variation in the instruments to estimate the effect of each of the three seating variables. In Table 7 we see that the same is true for the first stages corresponding to Table 7. Accordingly, the Sanderson and Windmeijer (2016) conditional first stage F-statistic measures of instrument strength shown at the bottom of Tables 6 and 7 are high for all of the endogenous variables.

Table A.8: First stage regressions for Table 6

	(1) Seat neighbors	(2) Seat neighbors previous venue	(3) Seat neighbors	(4) Seat neighbors previous venue	(5) Seat neighbors both venues
Seat neighbors, predicted	0.7229***	0.0867***	0.7841***	0.1420***	0.1398***
	(0.0448)	(0.0241)	(0.0460)	(0.0370)	(0.0346)
Seat neighbors, previous venue, predicted	0.1474***	0.7679***	0.2209***	0.8342***	0.2012***
	(0.0296)	(0.0365)	(0.0510)	(0.0404)	(0.0484)
Seat neighbors, both venues, predicted			-0.1384**	-0.1251**	0.4869***
			(0.0611)	(0.0503)	(0.0916)
Day-level fixed effects	Yes	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	Yes	Yes	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes	Yes	Yes
Observations	101,126,434	101,126,434	101,126,434	101,126,434	101,126,434
Clusters	76	76	76	76	76

Observations for the presented regression results are proposals-by-MEP pairs in the main analysis sample, excluding the dates prior to the first observed venue change, for which there is no information about the previous venue. In Columns (1) and (3) the outcome variable is an indicator for whether the MEP pair are seat neighbors during the current meeting. In Columns (2) and (4) the outcome variable is an indicator for whether the MEP pair were seat neighbors during the most recent meeting that took place in a different venue than the current one. In Column (5) the outcome variable is an indicator for whether the MEP pair are currently seat neighbors and were also seat neighbors during the most recent meeting that took place in a different venue than the current one. The listed regressors are indicators for whether the MEP pair is *predicted* to be seat neighbors currently, whether the MEP pair is *predicted* to have been seat neighbors during the most recent meeting that took place in a different venue than the current one, and whether the MEP pair is *predicted* to both be seat neighbors currently and to have been seat neighbors during the most recent meeting that took place in a different venue than the current one. *Predicted* seating refers to what would have occurred if there had been perfect compliance with the alphabetical seating rule. In addition to day-level and EP-by-EPG fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary-term. The number of such clusters is listed in the bottom section of the table. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A.9: First stage regressions for Table 7

	(1) Seat neigbhors next venue	(2) Seat neighbors	(3) Seat neighbors other venue	(4) Seat neighbors next venue	(5) Seat neighbors	(6) Seat neighbors other venue	(7) Seat neighbors both venues
Seat neighbors, next venue, predicted	0.7191***	0.0642***	0.0289	0.7092***	0.0485***	0.0140	0.0306
	(0.0454)	(0.0160)	(0.0231)	(0.0460)	(0.0139)	(0.0207)	(0.0194)
Seat neighbors, predicted	0.0751***	0.7028***	0.0777***	0.1138***	0.7638***	0.1358***	0.1238***
	(0.0229)	(0.0461)	(0.0249)	(0.0308)	(0.0459)	(0.0382)	(0.0346)
Seat neighbors, previous venue, predicted	0.0628***	0.1055***	0.7510***	0.1110***	0.1817***	0.8235***	0.1796***
	(0.0209)	(0.0226)	(0.0423)	(0.0333)	(0.0455)	(0.0412)	(0.0445)
Seat neighbors, both venues, predicted				-0.0798**	-0.1262**	-0.1199**	0.4953***
				(0.0367)	(0.0575)	(0.0490)	(0.0913)
Day-level fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Baseline name controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	86,517,817	86,517,817	86,517,817	86,517,817	86,517,817	86,517,817	86,517,817
Clusters	76	76	76	76	76	76	76

Observations for the presented regression results are proposals-by-MEP pairs in the main analysis sample, excluding the dates prior to the first observed venue change, for which there is no information about previous venue, and also excluding the dates after the last venue change in which there is no information about next venue. In Columns (1) and (4) the outcome variable is an indicator for whether members of the MEP pair will be seat neighbors during the first upcoming meeting that will take place in a different venue than the current one. In Column (2) and (5) the outcome variable is an indicator for whether the MEP pair are seat neighbors during the current meeting. In Columns (3) and (6) the outcome variable is an indicator for whether the MEP pair were seat neighbors during the most recent meeting that took place in a different venue than the current one. In Column (7) the outcome variable is an indicator for whether the MEP pair are currently seat neighbors and were also seat neighbors during the most recent meeting that took place in a different venue than the current one. The listed regressors are indicators for whether the MEP pair is *predicted* to be seat neighbors currently, whether the MEP pair is *predicted* to be seat neighbors during the first upcoming meeting that will take place in a different venue than the current one, whether the MEP pair is *predicted* to have been seat neighbors during the most recent meeting that took place in a different venue than the current one, and whether the MEP pair is *predicted* both to be seat neighbors currently and to have been seat neighbors during the most recent meeting that took place in a different venue than the current one. *Predicted* seating refers to what would have occurred if there had been perfect compliance with the alphabetical seating rule. In addition to day-level and EP-by-EPG fixed effects, all columns include the following "Baseline name similarity controls": an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. Standard errors in parentheses are dyadic cluster-robust, clustered at the level of row-by-EPG-by-parliamentary-term. The number of such clusters is listed in the bottom section of the table. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

H Estimated peer effects if sorting is ignored

To shed light on the bias that would occur if we estimated peer effects without our source of exogenous variation in seating, we examine vote congruence as a function of seat adjacency in the sample of parties that do not use alphabetical seating. Using data on votes by MEP pairs from these parties, Table A.10 shows results from a "naive" version of our main specification that directly regresses MEP-pair vote disagreement on an indicator for being seat neighbors. The results suggest a strong upward bias in estimating peer effects if one fails to account for endogenous seat selection, as the estimated effects are much larger than those we obtain in our main analysis: adjacent MEPs in these non-alphabetical parties are between 3 and 8 percentage points less likely to disagree depending on the specification, corresponding to persuasion rates of between 19 and 51 percent.

Table A.10: Estimated peer effects without accounting for sorting

	(1) Disagree OLS	(2) Disagree OLS	(3) Disagree OLS	(4) Disagree OLS	(5) Disagree OLS
Seat neighbors	-0.0551*** (0.0140)	-0.0790*** (0.0150)	-0.0296*** (0.0064)	-0.0295*** (0.0062)	-0.0301*** (0.0052)
Same quality education			-0.0103 (0.0000)	-0.0103 (0.0000)	-0.0100 (0.0000)
Same freshman status			0.0011 (0.0000)	0.0013 (0.0000)	0.0005 (0.0000)
Same country			-0.1446 (0.0000)	-0.1433 (0.0000)	-0.1449 (0.0000)
Age difference			0.0019 (0.0000)	0.0019 (0.0000)	0.0020 (0.0000)
Tenure difference			-0.0048 (0.0000)	-0.0047 (0.0000)	-0.0060 (0.0000)
Same gender			0.0010 (0.0000)	0.0013 (0.0000)	-0.0005 (0.0000)
Day-level fixed effects	Yes	Yes	Yes	Yes	Yes
Baseline name controls	No	Yes	Yes	Yes	Yes
EP-by-EPG fixed effects	No	Yes	Yes	Yes	Yes
Additional name similarity controls	No	No	No	Yes	Yes
Additional name rank gap controls	No	No	No	No	Yes
Observations	4,917,460	4,917,460	4,917,460	4,917,460	4,917,460
Clusters	49	49	49	49	49
Disagree mean	0.1547	0.1547	0.1547	0.1547	0.1547
Implied persuasion rate	0.3560	0.5107	0.1913	0.1907	0.1946

Observations in the presented regression results are proposals-by-MEP-pairs in which both MEPs are from the same non-alphabetically seated EPG. The outcome variable is an indicator variable denoting whether the MEP pair cast different votes on the proposal. *Seat neighbors* is an indicator for whether the MEP pair are seated adjacently. The remaining variables are self-explanatory (see Table 2 notes for detailed definitions). "Baseline name controls" are comprised of an indicator for whether the MEPs have the same last name and a flexible set of indicators to capture the distance between the MEPs' last names in the alphabetical ranking of all MEP last names in our data. "Additional name similarity controls" include cubic polynomials in Bigram-Jaccard and Levensthein name similarity as well as an indicator variable for whether the names sound alike under the SoundEx algorithm. "Additional name rank gap controls" are indicators for every 10-seat bin in the "overall name rank gap" variable (as described in the main text). Standard errors in parentheses are dyadic cluster-robust, at the level of row-by-EPG-by-parliamentary-term. The number of such clusters is listed in the bottom row of each panel. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

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