


LETTER

# Estimating Ideal Points of British MPs Through Their Social Media Followership

Conor Gaughan 

Department of Politics and International Relations, University of Southampton, UK  
Email: [cg1g21@soton.ac.uk](mailto:cg1g21@soton.ac.uk)

(Received 8 November 2023; revised 31 May 2024; accepted 17 September 2024)

## Abstract

Ideal points of MPs in the UK House of Commons (HoC) are characteristically difficult to ascertain due to tight party discipline and strategic voting by opposition members. This research note generates left/right ideal point estimates for 591 British MPs sitting in the HoC as of 22/08/2022, ascertained through their social media followership. Specifically, estimates are derived by conducting correspondence analysis (CA) on MP Twitter (X) follower networks, which are subsequently validated against an expert survey, confirming that these estimates have a high degree of between-party ( $R^2 = 0.93$ ) and within-party (Con:  $r = 0.84$ ; Lab:  $r = 0.81$ ) accuracy. The informative value of these estimates is then demonstrated by predicting candidate endorsement in the September 2022 Conservative leadership contest, confirming that an MP's ideal point was a statistically significant predictor of candidate endorsement, with Liz Truss drawing support primarily from the further right of the party.

**Keywords:** ideal points; social media; network analysis; party competition; expert survey

## Introduction

When people talk of ideology, they typically conceive of it in spatial terms between the 'left' and the 'right'. In political science, an *ideal point* refers to an individual's position within this latent ideological dimension where spatial voting models will attempt to estimate ideal points of legislators using the votes they cast on legislation (Enelow and Hinich 1984). Spatial voting models operate under the guiding principle that political preferences can be represented as points in a uni- or multi-dimensional space where legislators will consistently favour policy outcomes that most closely align with their own ideal point (Clinton, Jackman, and Rivers 2004). Classical spatial theory derives from the seminal works of Hotelling (1929), Downs (1957), and Black (1958) and has since been foundational to the study of legislative and electoral politics. The most well-known application of this method is Poole and Rosenthal's (1985), Poole and Rosenthal's (1991), and Poole and Rosenthal's (1997) DW-NOMINATE, which uses roll-call data from United States Congress to estimate ideal points of its members and has since been applied to a host of other legislative bodies including the European Parliament (Hix 2001; Lo 2018; Martin 2021), the Supreme Court (Cameron and Park 2009), the UN General Assembly (Binder and Payton 2022), and the national assemblies of other countries (Clerici 2021; Rosenthal and Voeten 2004). Unfortunately, estimating the ideal points of members of the UK House of Commons (HoC) using this same method has historically proven to be extremely difficult. This is largely due to the idiosyncratic nature of the UK parliament, which is characterized by a strong whipping system and a 'government vs. opposition culture', encouraging Members of Parliament (MPs) to

toe the party line more often than not instead of voting independently (Hix and Noury 2010; Spirling and McLean 2007).

As such, there remains a need for an adequate measure of MP's left/right positions in the UK. Potential solutions have been previously proposed by other researchers, including the use of Early Days Motions (EDM) in place of roll-call data (Franklin and Tappin 1977; Kellermann 2012), directly surveying parliamentary candidates (Norris and Lovenduski 1992; Norris and Lovenduski 1997; Norris and Lovenduski 2001), analyzing legislative speeches (Goet 2019; Schwarz, Traber, and Benoit 2017), or, very recently, by surveying local councillors (Hanretty and Lazarov 2023). This research note looks to add to this space by providing left/right estimates of sitting UK MPs through a proven estimation method that exploits the informativeness of social media followership. Research has shown that network connections between politically engaged users on social media are driven heavily by an ideological component (Bright 2016; Colleoni, Rozza, and Arvidsson 2014), and this fact can be leveraged to estimate the ideological position of users based on other users they connect with. The first paper to do so was Barberá's (2015) *Bayesian Spatial Following* model, subsequently followed by Barberá et al. (2015) which employs a multidimensional scaling technique known as correspondence analysis (CA) to estimate ideal points via social media network data.<sup>1</sup> Following the same methodology, this research generates left/right estimates for UK MPs sitting in the HoC as of 22/08/2022 (when the data was extracted) based on their social media followership, with network data derived from the platform formerly known as Twitter (X). To confirm the accuracy of these estimates, the ideal points generated through this method are validated against a set of mean ideological estimates gathered through an expert survey. Finally, to demonstrate the informative value of these ideal points, they are used to predict candidate endorsement in the September 2022 Conservative Party leadership contest.

Not only should these estimates prove useful for researchers and others more generally who are interested in measures of left/right position for parliamentary members they also highlight the effectiveness of social media followership in estimating ideal points for members in restrictive legislatures such as the UK. The data source for which these estimates were derived (Twitter/X) no longer provides comprehensive API access to researchers for free, which significantly restricts the likelihood of generating updated ideal points through this platform again in the future. Nonetheless, new opportunities may present themselves on alternative platforms, for which the method used in this research note can be similarly applied.

## Method

Typical spatial voting models like DW-NOMINATE work under the assumption that rational voters will most likely opt for individuals, parties, or policies they believe most closely align with their own ideal point (Enelow and Hinich 1984). As such, ideologically driven network structures, such as those found on social media platforms, can be exploited in a similar way: ordinary users are more likely to connect with political elites they perceive to be closest to them ideologically (McPherson, Smith-Lovin, and Cook 2001). Barberá's (2015) *Spatial Following* model leverages this fact to estimate the ideological position of political elites based on their social media followership. In essence, the model relies on the choice of ordinary users to follow (or not to follow) a political elite as a signal about the latent ideological position of that user, as well as their perception of the ideological position of the political elite. The closer an ordinary user  $i$  perceives political actor  $j$  to be to them in the latent ideological space, the higher the probability that they will follow them. Under this assumption, the probability that an individual user  $i$  chooses to follow a political elite  $j$  ( $y_{ij} = 1$ ) can be formulated as the *Spatial Following* model (Barberá 2015, 79):

<sup>1</sup>This method has also been worked into a popular R package called *tweetscores*. The original replication code for this method can be found at: [https://github.com/pablobarbera/twitter\\_ideology](https://github.com/pablobarbera/twitter_ideology)

$$P(y_{ij} = 1 | \alpha_j, \beta_i, \gamma, \Theta_i, \Phi_j) = \text{logit}^{-1}(\alpha_j + \beta_i - \gamma \| \Theta_i - \Phi_j \|^2). \quad (1)$$

where  $\alpha_j$  controls for the overall popularity of the political actor  $j$  (reflecting their likelihood of attracting more followers),  $\beta_i$  controls for user  $i$ 's level of political interest (reflecting their likelihood to follow more political actors),  $\gamma$  is a normalising constant, and  $\| \Theta_i - \Phi_j \|^2$  is the squared Euclidean distance in the unidimensional space between Twitter user  $i$  and political actor  $j$ . In this case,  $\Theta_i$  reflects the ideal point of Twitter user  $i$  and  $\Phi_j$  reflects the ideal point of political actor  $j$ . It is from these two latter parameters ( $\Theta_i, \Phi_j$ ) that we can derive ideological estimates for both elite political actors and for the ordinary users that follow them.

Traditionally, latent space models are estimated through Bayesian methods using Monte Carlo Markov Chain Simulations, and this is the case in Barberá's (2015) original *Spatial Following* model. However, as is documented in Barberá et al. (2015, 1,533), this becomes computationally intractable for extremely large network datasets such as those found on social media. Thus, CA is used instead, which has been found to produce a close approximation of a statistical ideal point model but at a much-reduced computational cost (Bonica 2014, 369). CA is a multidimensional scaling technique that is conceptually similar to principal components analysis but can be applied to categorical data instead of continuous (Greenacre 2010). A particular benefit of using CA is that it allows for multiple dimensions to be scaled at once where, in this case, ideology is typically captured in the 1st dimension (indicating that this is the most informative dimension driving political elite followership on social media). However, further dimensions could help to uncover other underlying factors driving ordinary-to-elite connectiveness in the UK.<sup>2</sup>

## Data

Social media network data for sitting UK MPs was gathered from Twitter/X via its API, accessed through Python's publicly available *Tweepy* library.<sup>3</sup> Owing to the API's rate limits and the volume of data to be gathered, data harvesting took place over a three-and-a-half week period commencing on 22/08/2022 and ending on 15/09/2022. As of the week commencing 22/08/2022, the number of UK MPs with an active Twitter/X account was  $n = 591$ . Summary statistics for each political party's representation on Twitter/X can be seen in Table 1.

The total combined number of followers between these MPs was  $m = 34,653,181$  and, among these followers, the overall number of unique accounts was  $m = 11,071,104$ . A significant proportion of these accounts are not useful due to inactivity and the presence of bots, so the sample was refined before being used for analysis, following two steps from Barberá's (2015, 81) 5-step approach to filtering fake or non-active user profiles. Profiles were discarded if they satisfied any of two criteria: (1) sent fewer than one hundred tweets and/or (2) had fewer than twenty-five followers. After filtering the dataset using these criteria, this left the sample of unique accounts at  $m = 4,460,657$ . Among these accounts, the median number of MPs followed is extremely low (1). The overall distribution of users by the number of MPs they follow is heavily right-skewed, with over half of all users (52 per cent) in the filtered dataset following only a single MP (see Fig. 1).

Previous research supports this finding, where studies have shown that the majority of Twitter/X users do not follow political elites, instead favouring non-political opinion leaders over political ones (Mukerjee, Jaidka, and Lelkes 2022; Wojcieszak et al. 2022). Given that the modelling strategy used here relies upon the ability of ordinary users to reasonably judge the ideological position of both themselves and political elites, only users who are *especially* politically engaged are

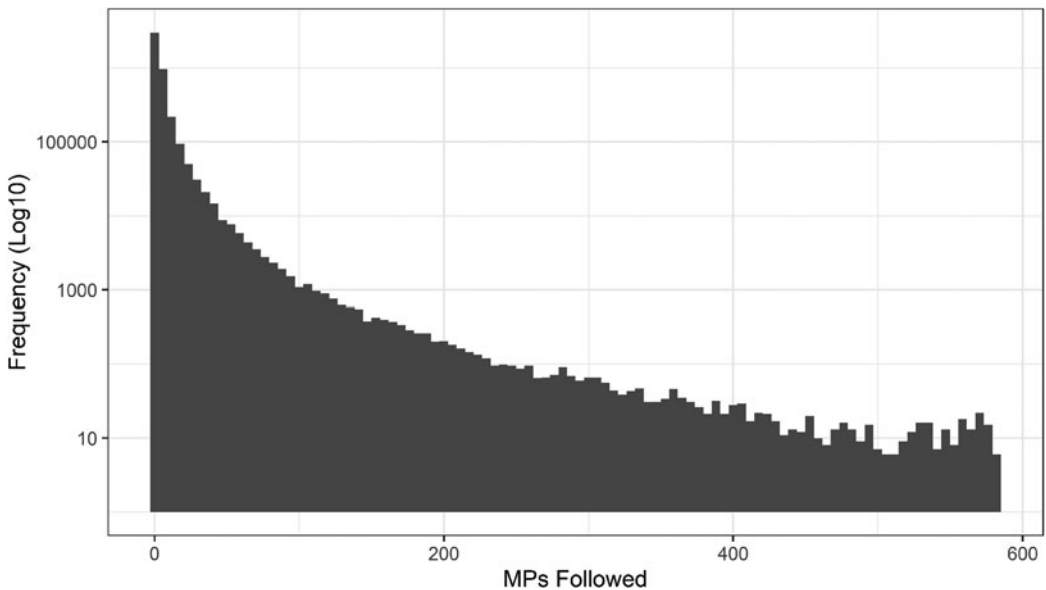
<sup>2</sup>For further details about how CA works, see Supplementary Material: Section 1.

<sup>3</sup>*Tweepy* is a publicly available Python library which acts as a user-friendly wrapper for accessing the Twitter/X API. It can be found here: <https://www.tweepy.org/>

**Table 1.** All UK MP Twitter/X accounts

	<i>N</i>	<i>N</i> (%)	Median followers	Median following	Median tweets
All	591/650	91	18,385	1,515	7,710
Conservative	312/359	87	14,651	1,049	4,850
Labour	194/201	97	27,495	2,196	12,865
SNP	45/45	100	16,368	2,129	16,016
Lib Dem	14/14	100	18,038	1,642	9,264
Sinn Féin	7/7	100	20,448	1,649	7,170
DUP	6/8	75	14,009	914	4,752
Independent	3/6	50	72,657	6,737	16,882
Plaid Cymru	3/3	100	10,644	1,967	25,355
Alba	2/2	100	14,775	1,543	16,093
SDLP	2/2	100	46,277	3,694	19,270
Alliance	1/1	100	18,299	2,106	8,522
Green	1/1	100	586,416	6,738	30,674
Speaker	1/1	100	41,745	3,126	5,442

*N* (%) relative to *N* in the House of Commons.



**Figure 1.** Histogram of users by the number of MPs they follow. The Y-axis is on a base 10 log scale and the number of bins = 100. The median number of MPs followed by users is 1.

selected to optimize model performance (as well as significantly reduce computational cost). To do so, in line with Barberá’s (2015, 81) 5-step filtering approach, the sample of ordinary users is further filtered to include only those users who follow at least *ten times* the median number of MPs (10). This especially informative subset contains  $m = 424,297$  users and  $e = 11,443,165$  unique follow connections with the  $n = 591$  MPs.<sup>4</sup> (See Table 2 for user profile summary statistics).

Taking this final set of MPs  $n$  and their especially informative subset of followers  $m$ , a network adjacency matrix  $\mathbf{Y}$  is constructed where individual elements can take a binary form of integers 0

<sup>4</sup>Robustness checks were conducted to assess model performance and accuracy of the model estimates using various user sample thresholds. To see the results of these checks, see Supplementary Material: Section 2.

**Table 2.** Summary statistics of profile metadata for the subset of especially informative users

Users $N$	Verified (%)	MPs Followed	Followers	Following	Tweets	Listed
424,297	2	17	347	1,163	2,490	2

**Table 3.** Network adjacency matrix summary statistics

$N$	$M$	$e$	Potential $e$	Realised $e$
591	424,297	11,443,165	250,759,527	5%

Realized  $e$  calculated as the actual  $e$  over potential  $e$ .

or 1. Where an ordinary user  $i$  follows MP  $j$   $y_{ij} = 1$ , otherwise  $y_{ij} = 0$ . Ordinary users  $m$  form the rows and MPs  $n$  form the columns, thus generating a large matrix of dimensions  $424,297 \times 591$ . The nature of this network is fundamentally non-reciprocal with  $e$  follow connections only flowing in one direction from users  $m$  to MPs  $n$ . (See Table 3).

Dimensionality reduction is then performed on this sparse follower adjacency matrix  $\mathbf{Y}$  using CA, implemented in R using the *ca* function from the *ca* library. One unique aspect of the UK HoC is the presence of nationalist parties in Scotland, Wales and Northern Ireland. The modelling strategy assumes that when controlling for  $\alpha_i$  and  $\beta_j$ , the primary component that predicts the likelihood of a connection between actors  $j$  and users  $i$  is ideological. Thus, when scaling the HoC, one would expect MPs to cluster around some form of shared ideological or partisan identity. However, in the case of nationalist parties, their shared regional component appears to overwhelm their ideological one. This effect is especially dominant with the Scottish National Party (SNP), the third largest party block in the HoC, and significantly warps the overall ideological scale as well as the estimates for MPs from other parties.<sup>5</sup> Fortunately, another benefit of using CA for ideal point estimation is the ability to scale spatial maps using an initial subset of data and then subsequently project supplementary data onto this pre-constructed space. Therefore, the ideological space is initially scaled excluding MPs representing nationalist parties to ensure that the dimension being mapped reasonably approximates left/right ideology. The nationalist party MPs are then retroactively projected onto this scale.<sup>6</sup>

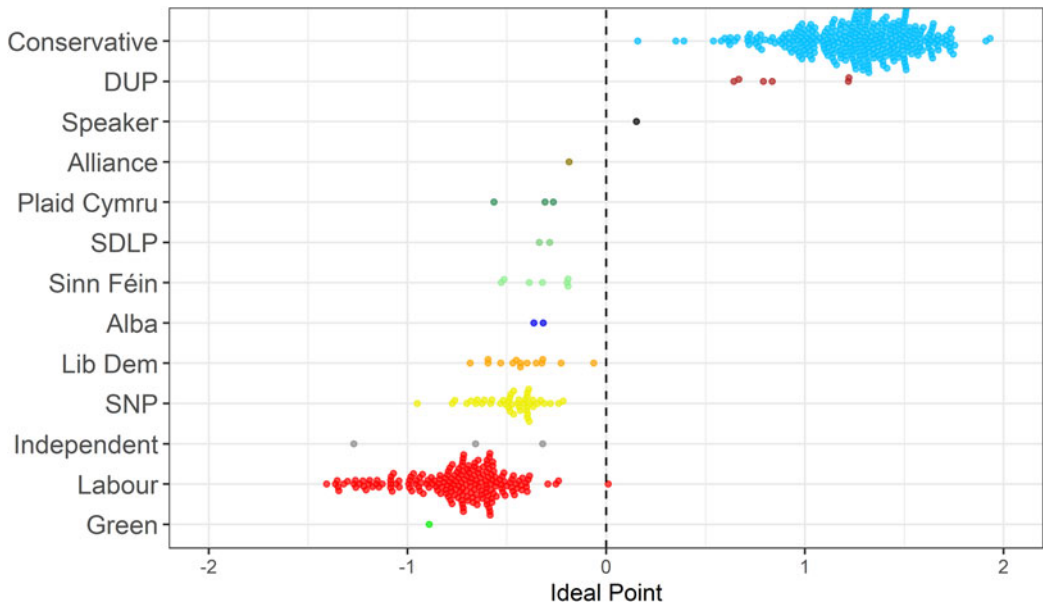
## Results and Validation

Figure 2 illustrates a beeswarm plot of ideal points for the 591 MPs by political party in the HoC. Plotting the spatial map in this way demonstrates that the CA model has high face validity.

Clear between-party clustering indicates that the model can successfully discriminate between MPs from different political parties. More importantly, MPs from different parties that we know officially occupy similar spaces on the ideological axis, such as the Greens and Labour on the left or the DUP and the Conservatives on the right, are also clustered closer together. This indicates that the dimension is not simply capturing partisanship but reflects the left/right spectrum of British politics. Ordinary users are not necessarily just following MPs from the political parties

<sup>5</sup>It is clear that the clustering dimension is not simply partisanship given that the same effect is also present in the Alba Party, Scotland's other nationalist party. Likewise, Scottish MPs within other non-nationalist parties also skew significantly towards the SNP, indicating a regional effect. See Supplementary Material: Section 3.2 for more details.

<sup>6</sup>Including the Speaker and Independents, there were 13 parties in the HoC at the time of data collection. 7 of these were nationalist parties with a combined total of 66 MPs who are treated as supplementary columns. There are 2,153 ordinary users who exclusively followed nationalist MPs requiring them to be treated as supplementary rows.



**Figure 2.** Beeswarm plot of the 591 MPs in the House of Commons with estimated ideal points, grouped and coloured by party affiliation. Parties are ordered along the y-axis by each party's median ideal point, starting at the bottom from the furthest to the left and going up to the furthest right.

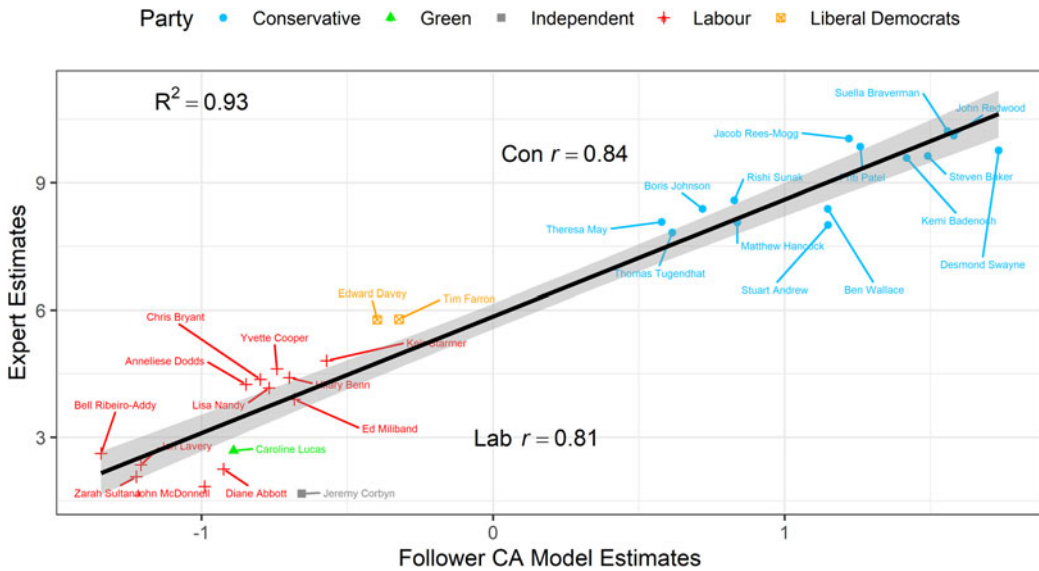
they identify with but MPs from across parties that they perceive to sit in reasonable proximity to themselves along the ideological axis.

To formally validate the ideal point estimates, an expert survey was conducted. This survey was distributed to a select group of expert academics in the field of British politics. Of the experts, 133 were contacted with a 53 per cent response rate (70). The survey asked them to place a sample of 30 MPs on an ideological scale between 0 (Left) and 10 (Right). Thirteen MPs were sampled from both the Conservative and Labour parties, along with two from the Liberal Democrats, one from the Green Party, and one Independent. There was an attempt to balance the sample with some more established MPs along with some that are reasonably lesser known, as well as between MPs with larger Twitter/X followings and those with less. This was to ensure that model performance for both left-wing and right-wing MPs could be assessed, and also to validate its accuracy when estimating placement for MPs with smaller sample sizes (low follower counts).<sup>7</sup> Validation of the CA model estimates for the 30 MPs against the mean estimates provided by the experts is illustrated in Fig. 3.

For validation, weighted least squares regression was conducted to predict the expert ideology estimates using the ideal point estimates generated by the CA model. Model weights were applied using the standard errors of the expert estimates to account for the degree of uncertainty in the validation set itself. Model coefficients would indicate that the CA model ideal points have a high degree of between-party accuracy ( $R^2 = 0.93$ ). Pearson's correlation tests were used to assess the within-party accuracy of the CA model between Conservative and Labour MPs respectively, demonstrating a high degree of correlation in both cases (Con:  $r = 0.84$ ; Lab:  $r = 0.81$ ).

To further demonstrate the within-party discriminative power of the CA model estimates, ideal point distributions of Conservative and Labour MPs are split along three major ideological divides: abortion stance, Brexit stance, and party faction. For the abortion stance, an MP's position is

<sup>7</sup>For a detailed description of the survey design, expert sample selection, and summary statistics of the expert estimates, see Supplementary Material: Section 4.



**Figure 3.** The ideal point estimates for the 30 MPs are plotted along the x-axis and the mean ideology estimates provided by the experts are plotted along the y-axis.

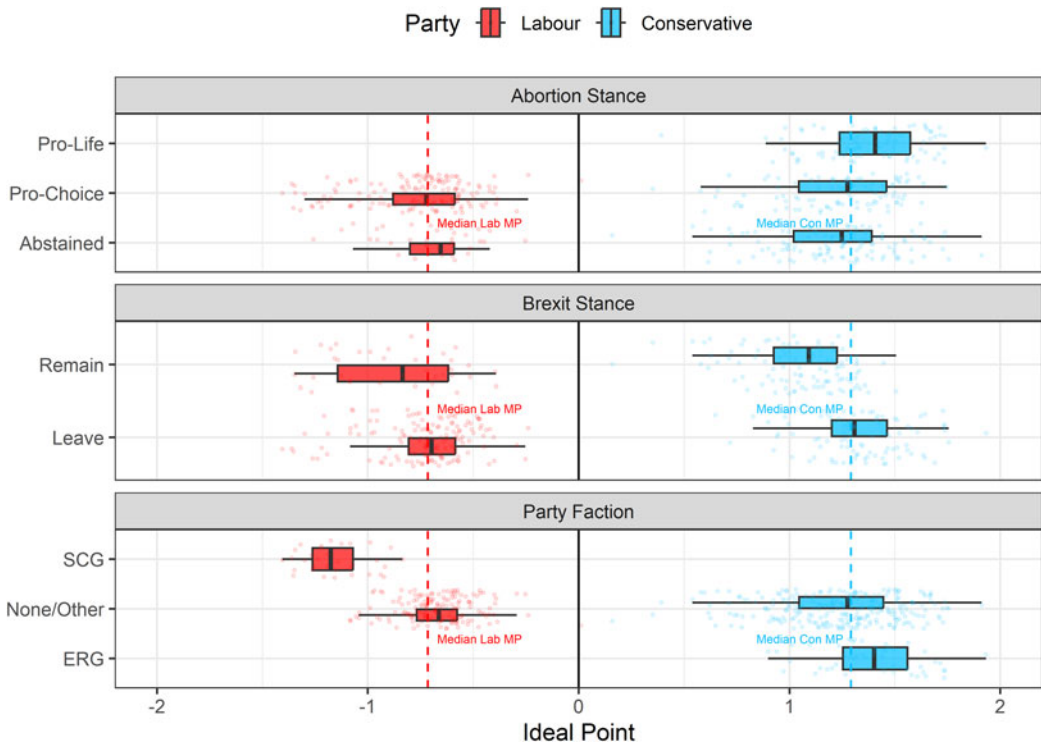
inferred through their vote on Clause 11 of the Public Order Bill 2022, which makes it an offence to interfere with access to abortion services.<sup>8</sup> There were no recorded votes against this bill from Labour MPs but there was a 19 per cent abstention rate. Brexit stance for Conservative MPs is derived from a dataset collated by Cygan, Lynch, and Whitaker (2021), which provides Remain/Leave positions for 200 Conservative MPs elected in the 2015–2017 parliament, sourced from various statements made by MPs on their websites, in the media, and on Twitter. For Labour MPs, instances of open declarations of support for Leave were extremely rare in this dataset, so the Brexit stance for Labour MPs is inferred through their support for or rebellion against Boris Johnson’s European Union (Future Relationships) Bill in December 2020, which allowed for the ratification of Brexit withdrawal. This is an imperfect method as the support for or rebellion against this bill does not necessarily directly reflect remain/leave sentiment. However, given that supporting this bill was enforced with a three-line whip by Labour, rebellion was a high-cost decision and so can still be informative.<sup>9</sup> Finally, both parties contain multiple internal factions and pressure groups that can help to distinguish between different ideological spaces within them. The most prominent faction within the Conservative Party is the European Research Group (ERG), a hard-right caucus of MPs, set up in 1993 to act as the voice of Euroscepticism within the party. Whilst there is no official membership list, support for this faction can be inferred through subscriptions paid to the ERG by MPs since 2016. Sixty-four Conservative MPs can be identified as either current or former members of the ERG.<sup>10</sup> The most prominent faction within the Labour Party is the Socialist Campaign Group (SCG), a hard-left socialist contingent of MPs, founded in 1982. There are currently 33 official members.<sup>11</sup> Within-party MP ideal points are illustrated along these three ideological divides as jittered boxplots in Fig. 4.

<sup>8</sup>Vote data can be found through the Public Whip archive: <https://www.publicwhip.org.uk/division.php?date=2022-10-18&house=commons&number=62>

<sup>9</sup>Vote data can be found through the Public Whip archive: <https://www.publicwhip.org.uk/division.php?date=2020-12-30&house=commons&number=190>

<sup>10</sup>List can be found here: <https://bylinetimes.com/2021/08/23/a-party-within-a-party-calls-for-investigation-into-european-research-group-paid-quarter-of-a-million-in-taxpayer-cash-since-brexit/>

<sup>11</sup>List can be found through the SCG’s official Twitter account: <https://twitter.com/i/lists/1220096981848162305>



**Figure 4.** Jittered boxplots of MPs from the Conservative (right-side) and Labour (left-side) parties grouped by their ideological factions, inferred through voting patterns, declarations of support, and party subgroup membership. All NAs were removed.

The boxplots in Fig. 4 add credence to the fact that these ideal point estimates reasonably approximate the left/right ideological spectrum of British politics. In both cases, party faction membership, on average, places these MPs notably further to the right and the left of the median position of their parties, respectively. As for abortion stance, the median ideal point of pro-choice MPs is to the left of the average pro-life MP in both parties (assuming abstaining MPs in the Labour Party are pro-life). The model also places Conservative MPs who declared their support for remaining towards the left of the party, and this effect is the same to a lesser degree in the case of Labour MPs who rebelled against Johnson's Brexit Bill. However, it is also evident that there is a significant range across these distributions, emphasizing the importance of having a unique ideal point for each MP.

## Application

These ideal points have a range of potential applications within the field of UK parliamentary study, such as a better understanding of intra-party competition or dyadic representation (Hanretty, Lauderdale, and Vivyan 2017). The final section of this research note will demonstrate one such example, using these ideal points to predict candidate endorsement in the September 2022 Conservative Party leadership contest. Voting for this contest opened on July 13 and was initially contested by eight MPs, travelling through five separate MP ballots, eventually narrowing down to two final candidates: Liz Truss and Rishi Sunak (see Table 4). The resulting members' ballot elected Truss as leader on September 5th by a margin of 57 per cent/43 per cent.<sup>12</sup>

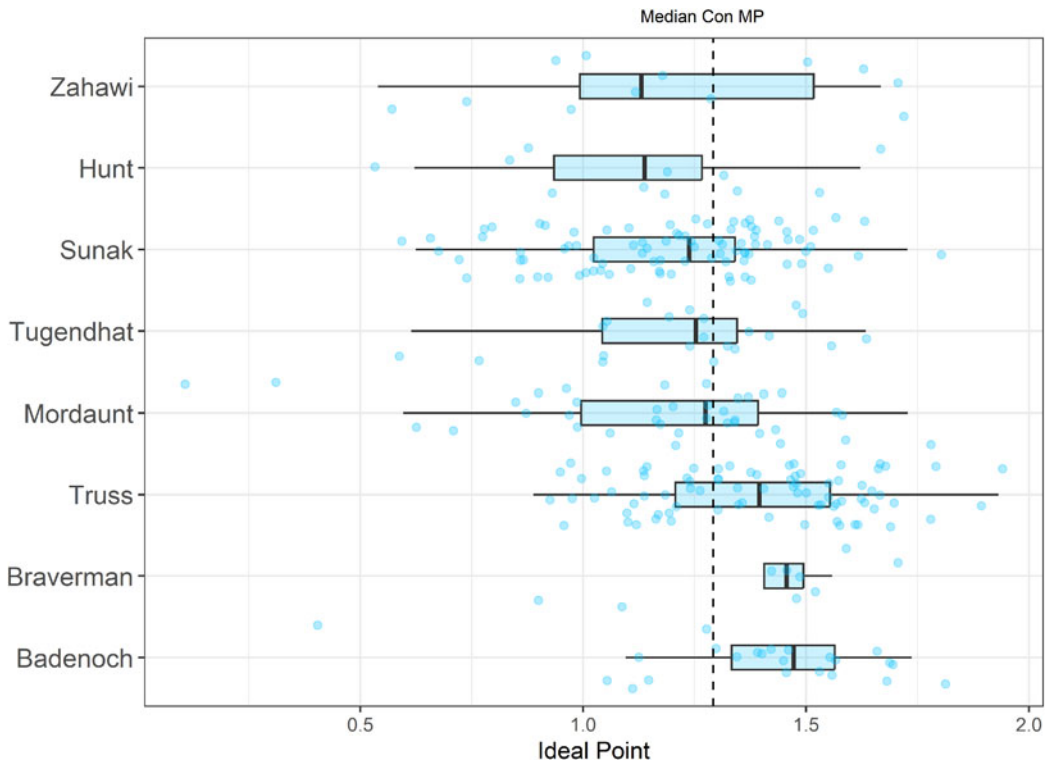
<sup>12</sup>Official leadership nomination data obtained from <https://www.politico.eu/conservative-leadership-election2022/>.



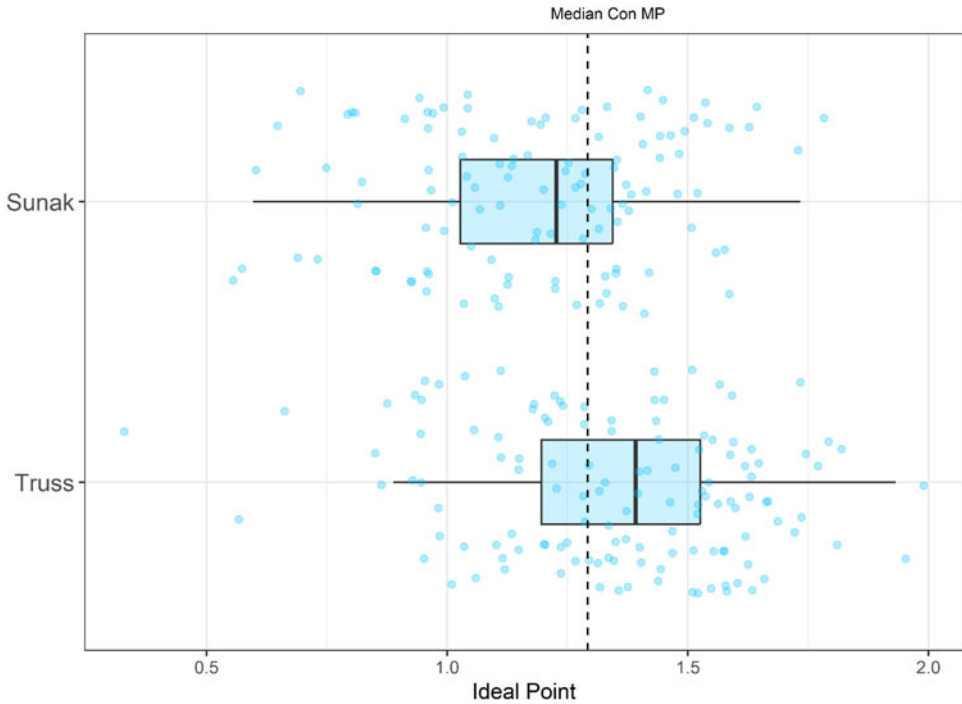
**Table 4.** Table of conservative parliamentary eliminative ballots

	Round 1		Round 2		Round 3		Round 4		Round 5	
	N	%	N	%	N	%	N	%	N	%
Rishi Sunak	88	25	101	28	115	32	118	33	137	38
Liz Truss	50	14	64	18	71	20	86	24	113	32
Penny Mordaunt	67	19	83	23	82	23	92	26	105	29
Kemi Badenoch	40	11	49	14	58	16	59	17	-	-
Tom Tugendhat	37	10	32	9	31	9	-	-	-	-
Suella Braverman	32	9	27	8	-	-	-	-	-	-
Nadhim Zahawi	25	7	-	-	-	-	-	-	-	-
Jeremy Hunt	18	5	-	-	-	-	-	-	-	-
Votes Cast	357	100	356	99	357	100	355	99	355	99

Candidate endorsements are obtained via the Conservative Home official website.<sup>13</sup> Of the 357 Conservative MPs eligible to vote at the time of the contest, leadership endorsements could be obtained for 319 (89 per cent) in the first round of voting, leaving 38 undecided. Of those 319 MPs, 278 had Twitter/X accounts from which ideal points could be estimated. Figure 5 illustrates the jittered boxplots for ideal points of MPs who publicly endorsed each of the eight initial party leadership candidates. A descriptive analysis would align with general expectations: candidates Truss, Braverman, and Badenoch appear to have drawn their support from further to the

**Figure 5.** Jitter boxplot distributions of the ideal points of MPs who publicly endorsed each of the 8 initial Conservative Party leadership candidates.

<sup>13</sup> Accessed here: <https://conservativehome.com/2022/08/25/next-tory-leader-whos-backing-whom-ourworking-list/>



**Figure 6.** Jitter boxplot distributions of the ideal points of MPs who publicly endorsed each of the two final Conservative Party leadership candidates.

right of the party, whilst Truss' two primary competitors, Sunak and Mordaunt, look to have drawn their support from closer to the centre of the party in the early stages of the contest.

### *Initial Candidate Endorsements – First Round*

Over five rounds of MP ballots, six candidates were eliminated, leaving Liz Truss and Rishi Sunak to contest the final members' ballot. As candidates were eliminated, many MPs switched their initial endorsements to other remaining candidates. This provides a reasonably balanced sample of endorsements split between the two final candidates. Endorsements could be obtained for 245 MPs with Twitter accounts in the final round, leaving 112 undeclared or with no ideal point. [Figure 6](#) illustrates the jittered boxplots for ideal points of MPs who publicly endorsed the two final candidates in the membership round of voting.

### *Final Candidate Endorsements – Membership Round*

The median ideal point of supporters for both Rishi Sunak and Liz Truss do not change substantially from their scores in the first round of endorsements. Both Sunak's (1.24→1.23) and Truss' (1.4→1.39) lower slightly, suggesting a mild moderating effect as they gained more endorsements from MPs across the party. What remains clear in both instances is that Liz Truss appears to have drawn more support from MPs further to the right of the Conservative Party. To formally confirm this association, simple binary logistic regression is used, predicting endorsement for the eventual winner, Truss, relative to the unsuccessful runner-up, Sunak, using an MP's ideal point as the key independent variable. A number of demographic and political control variables are also included in the model, details of which can be found in [Supplementary Material: Section 5](#). Three models are fitted, one including only an MP's ideal point, the second controlling

**Table 5.** Logistic regression model coefficients – predicting support for Truss relative to Sunak

	Support for Truss		
	Model 1	Model 2	Model 3
Ideal point	12.10***	11.82***	18.27***
Social variables			
Gender (Female)		3.75**	3.81**
Ethnicity (Minority)		1.53	1.42
Year of birth		1	1.01
School type (relative to private)			
Grammar		0.81	0.84
State		0.93	0.98
University type (relative to Oxbridge)			
Russell Group		1.79	1.93
Non-Russell Group		1.43	1.50
None		4.89	5.67
Political variables			
Cohort (relative to pre-1997)			
1997–2010			0.48
2010–2015			0.84
2015–2019			0.71
2019			0.42
Minister (relative to current ministers)			
Former minister			0.73
Never			0.57
Majority (%)			0.99
AIC	318.73	249.33	257.6
Pseudo $R^2$	0.07	0.14	0.16
$N$	245	192	192

Signif. Codes:  $\leq 0.05^*$ ,  $\leq 0.01^{**}$ ,  $\leq 0.001^{***}$ .

for demographic variables, and the third also including political variables. Model results are shown in Table 5.

Model results would indicate that an MP's ideal point was a statistically significant predictor of endorsement choice, with each unit increase further to the right associated with a higher likelihood of endorsement for Truss over Sunak. This relationship remains statistically significant when controlling for both social and political variables. These results would confirm that ideological position was a significant component of candidate endorsement in the September Conservative leadership election and that, for each ideal point increase further to the right an MP moved, they were at least eleven times more likely to endorse Truss over Sunak. The model also demonstrates that a gendered component to candidate endorsement was present, with female MPs significantly more likely to endorse Truss over Sunak.

## Conclusion

In conclusion, this research note has produced ideal point estimates for 591 UK MPs sitting in the House of Commons as of 22/08/2022. These left/right estimates were derived from their complete Twitter/X follower networks using correspondence analysis and were validated against a set of expert estimates, confirming both a high degree of between-party and within-party accuracy. As a demonstration of their potential usage in the UK parliamentary study, these ideal points were then used to predict candidate endorsement in the September 2022 Conservative Party leadership contest, confirming that ideology was a statistically significant component of Liz Truss' victory over Sunak. Results indicated that Truss drew her support primarily from the further right of the Conservative Party, whilst Sunak drew his from closer to the centre. Although data access via the Twitter/X API to update these estimates has now been significantly restricted

for the majority of researchers, these ideal points still provide wide coverage of the majority of MPs in the HoC. In future, there may be the potential for generating new estimates using this same method via alternative social networking sites, if we see significant uptake by UK politicians. In the meantime, these ideal point estimates (along with estimates for additional dimensions and ideal points of the ordinary users produced by the CA model) will be made available online for researchers interested in the study of legislative politics in the UK.

**Supplementary material.** The supplementary material for this article can be found at <https://doi.org/10.1017/S0007123424000450>.

**Data availability statement.** Replication Data for this article can be found in Harvard Dataverse at: <https://doi.org/10.7910/DVN/JDB0SE>.

**Acknowledgements.** The author gratefully acknowledges the 70 academics contacted as part of the expert survey who gave their time to complete the survey, providing a validation set for this research. The author also acknowledges the comments made on earlier versions of this article by Will Jennings, Rebecca Hoyle, Markus Brede, Stuart Turnbull-Dugarte, George Bolton, and all the members of the ECPR Joint Session on social media research at Sciences Po, Toulouse, 2023. Finally, the author thanks the three anonymous reviewers and the editor, René Lindstädt, for their detailed feedback.

**Financial support.** This work was supported by the Economic and Social Research Council [grant number: ES/P000673/1].

**Competing interests.** None.

## References

- Barberá P** (2015) Birds of the same feather tweet together: Bayesian ideal point estimation using Twitter data. *Political Analysis* 23(1), 76–91. <https://doi.org/10.1093/pan/mpu011>
- Barberá P et al.** (2015) Tweeting from left to right: Is online political communication more than an echo chamber? *Psychological Science* 26(10), 1531–1542. <https://doi.org/10.1177/0956797615594620>
- Binder M and Payton AL** (2022) With frenemies like these: Rising power voting behavior in the UN General Assembly. *British Journal of Political Science* 52(1), 381–398. <https://doi.org/10.1017/S0007123420000538>
- Black D** (1958) On the rationale of group decision-making. *Journal of Political Economy* 56(1), 23–24.
- Bonica A** (2014) Mapping the ideological marketplace. *American Journal of Political Science* 58(2), 367–386. <https://doi.org/10.1111/ajps.12062>
- Bright J** (2016) Explaining the emergence of echo chambers on social media: The role of ideology and extremism. *arXiv preprint arXiv:1609.05003*.
- Cameron CM and Park JK** (2009) How will they vote? Predicting the future behavior of Supreme Court nominees, 1937–2006. *Journal of Empirical Legal Studies* 6(3), 485–511. <https://doi.org/10.1111/j.1740-1461.2009.01151.x>
- Clerici P** (2021) Legislative territorialization: The impact of a decentralized party system on individual legislative behavior in Argentina. *Publius: The Journal of Federalism* 51(1), 104–130. <https://doi.org/10.1093/publius/pjaa036>
- Clinton J, Jackman S and Rivers D** (2004) The statistical analysis of roll call data. *American Political Science Review* 98(2), 355–370. <https://doi.org/10.1017/S0003055404001194>
- Colleoni E, Rozza A and Arvidsson A** (2014) Echo chamber or public sphere? Predicting political orientation and measuring political homophily in Twitter using big data. *Journal of Communication* 64(2), 317–332. <https://doi.org/10.1111/jcom.12084>
- Cygan A, Lynch P and Whitaker R** (2021) *MPs' positions on the UK's referendum on European Union membership, 2016. [data collection]*. Colchester, Essex: UK Data Service. <https://doi.org/10.5255/UKDA-SN-854015>
- Downs A** (1957) *An Economic Theory of Democracy*. New York: Harper.
- Enelow JM and Hinich MJ** (1984) *The Spatial Theory of Voting. An introduction*. Cambridge: Cambridge University Press.
- Franklin MN and Tappin M** (1977) Early day motions as unobtrusive measures of backbench opinion in Britain. *British Journal of Political Science* 7(1), 49–69. <https://doi.org/10.1017/S0007123400003963>
- Gaughan C** (2024) Replication Data for: Estimating Ideal Points of British MPs Through Their Social Media Followership. Harvard Dataverse. V1. UNF:6:bjqNQzbQ+/s+8rFm97U0w==. Available from <https://doi.org/10.7910/DVN/JDB0SE>
- Goet ND** (2019) Measuring polarization with text analysis: Evidence from the UK House of Commons, 1811–2015. *Political Analysis* 27(4), 518–539. <https://doi.org/10.1017/pan.2019.2>
- Greenacre MJ** (2010) Correspondence analysis. *Wiley Interdisciplinary Reviews: Computational Statistics* 2(5), 613–619. <https://doi.org/10.1002/wics.114>
- Hanretty C and Lazarov V** (2023) The left-right positions of British MPs [were] inferred from a survey of local councillors. Working paper. Available from <https://github.com/chrishanretty/pairwisemps/blob/main/article/20230929-hanretty-pairwise.pdf>

- Hanretty C, Lauderdale BE and Vivyan N** (2017) Dyadic representation in a Westminster system. *Legislative Studies Quarterly* 42(2), 235–267. <https://doi.org/10.1111/lsq.12148>
- Hix S** (2001) Legislative behaviour and party competition in the European parliament: An application of nominate to the EU. *Journal of Common Market Studies* 39(4), 663–688. <https://doi.org/10.1111/1468-5965.00326>
- Hix S and Noury A** (2010) Scaling the commons: Using MP's left-right self-placement and voting divisions to map the British parliament, 1997–2005. *Paper prepared for presentation at the annual meeting of the American Political Science Association in Washington, DC, September 2–5, 2010.*
- Hotelling H** (1929) Stability in competition. *Economic Journal* 39, 41–57.
- Kellermann M** (2012) Estimating ideal points in the British House of Commons using early day motions. *American Journal of Political Science* 56(3), 757–771. <https://doi.org/10.1111/j.1540-5907.2012.00587.x>
- Lo J** (2018) Dynamic ideal point estimation for the European Parliament, 1980–2009. *Public Choice* 176(1), 229–246. <https://doi.org/10.1007/s11127-018-0551-3>
- Martin AR** (2021) Party group collapse and strategic switching in the European parliament. *European Union Politics* 22(3), 521–544. <https://doi.org/10.1177/1465116521999718>
- McPherson M, Smith-Lovin L and Cook JM** (2001) Birds of a feather: Homophily in social networks. *Annual Review of Sociology* 27(1), 415–444. <https://doi.org/10.1146/annurev.soc.27.1.415>
- Mukherjee S, Jaidka K and Lelkes Y** (2022) The political landscape of the US Twitterverse. *Political Communication* 39(5), 565–588. <https://doi.org/10.1080/10584609.2022.2075061>
- Norris P and Lovenduski J** (1992) British candidate study, 1992. Available from <http://www.pippanorris.com/>
- Norris P and Lovenduski J** (1997) British candidate study, 1997. Available from <http://www.pippanorris.com/>
- Norris P and Lovenduski J** (2001) British candidate study, 2001. Available from <http://www.pippanorris.com/>
- Poole KT and Rosenthal H** (1985) A spatial model for legislative roll call analysis. *American Journal of Political Science* 29(2), 357–384. <https://doi.org/10.2307/2111172>
- Poole KT and Rosenthal H** (1991) Patterns of congressional voting. *American Journal of Political Science* 35(1), 228–278. <https://doi.org/10.2307/2111445>
- Poole KT and Rosenthal H** (1997) *Congress: A Political Economic History of Rollcall Voting*. New York: Oxford University Press.
- Rosenthal H and Voeten E** (2004) Analyzing roll calls with perfect spatial voting: France 1946–1958. *American Journal of Political Science* 48(3), 620–632. <https://doi.org/10.1111/j.0092-5853.2004.00091.x>
- Schwarz D, Traber D and Benoit K** (2017) Estimating intra-party preferences: Comparing speeches to votes. *Political Science Research and Methods* 5(2), 379–396.
- Spirling A and McLean I** (2007) UK OC OK? Interpreting optimal classification scores for the UK House of Commons. *Political Analysis* 15(1), 85–96. [https://doi.org/10.1093/pan/15\(1\)/1](https://doi.org/10.1093/pan/15(1)/1)
- Wojcieszak M et al.** (2022) Most users do not follow political elites on Twitter; those who do show overwhelming preferences for ideological congruity. *Science Advances* 8(39), 1–10. <https://doi.org/10.1126/sciadv.abn9418>