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Title: Extremism at the centre: Uncovering political diversity amongst midpoint responders on the left-right self-placement item

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Abstract

A significant body of research has examined the relationships between political ideology and conspiracy beliefs. Conspiracy theories are often considered the province of "extremist" political positions. Intriguingly, however, several recent studies have demonstrated that people at the midpoint of the left-right self-placement item often displayed elevated conspiracy beliefs. The cause of this "midpoint bump" is unknown. Based on these observations, our research investigated the extent to which midpoint bumps exist in other domains. Using data from the Australian Election Study (N = 2179) and the American National Election Study (N = 8280), we conducted polynomial tests on the relationships between the left-right item and a range of social and political attitudes. We found W-shaped relationships primarily across attitudes towards the political system and immigrants. To explore the possibility that subgroups may hold anti-establishment and anti-immigrant attitudes that distinguish them from typically-moderate responders, we conducted Latent Profile Analyses on midpoint responders. In both samples, one profile represented an extreme response pattern relative to other profiles, consistent with populist attitudes. We discuss the implications of the left-right scale conflating political diversity at the midpoint for ideological measurement, as well as how it hinders understanding anti-establishment tendencies across the political spectrum.

Introduction

Political ideology, defined as an internally-consistent belief system, reliably predicts between-person differences on attitudes towards social and political issues, cognitive motivational tendencies, and political behaviour and party support (Jost, 2006). A person's ideological leaning is commonly measured using the left-right[1] self-placement item in survey research (see Bauer et al., 2017 for a description of the history of its usage), and is a standard measure of ideology in large nationally-representative surveys. For example, in the Australian Election Study (AES), participants are asked to respond to the following item: "In politics, people sometimes talk about the 'left' and the 'right'. Where would you place yourself on a scale from 0 to 10, where 0 means the left and 10 means the right?" (McAllister et al., 2019, p. 6, questionnaire booklet). Researchers often correlate scores on this measure with scores on various political attitudes, values and psychological constructs, and these relationships are typically assumed to be linear (e.g., Jost et al., 2003). However, U-shaped relationships are described for variables which extreme left- and right-wing respondents may score similarly, such as cognitive rigidity, and conspiracy beliefs (Burger, 2024; Krouwel et al., 2017).

Studies have also reported correlation plots displaying relatively extreme scores on other constructs for participants *at the midpoint* of the left-right item. For example, the reported W-shaped relationships between the left-right item and conspiracy beliefs (Imhoff et al., 2022; Marques et al., 2022), and political knowledge (De keersmaecker et al., 2024), where a

[1] Or liberal-conservative, in the U.S. context in particular. This paper will refer to the self-placement item as the left-right item except when referring to the U.S. context directly, as left-right is used more commonly outside of the U.S.

pronounced *bump*[2] at the midpoint of the left-right item was present in both cases. In these findings, the bump reflects that midpoint responders are on average more conspiratorial, and less knowledgeable (in many national samples), than what would be assumed for a linear relationship. These intriguing findings are at odds with the popular conception of those in the middle of the political spectrum as "moderates".

To date, however, there is no published investigation into how prevalent extreme scores at the midpoint are across social and political issues, and the reason for their occurrence. High prevalence could indicate that midpoint responders are simply more extreme than assumed, or at least, that midpoint responders as a whole comprise two or more politically-diverse sub-groups. The midpoint may therefore be conflating genuinely-moderate with extreme responders.

We propose that the midpoint bumps are a result of political heterogeneity amongst midpoint responders, wherein participants at the midpoint include both traditional moderates as well as participants with other distinctive political profiles, including populists. We suggest that this heterogeneity could be uncovered by observing consistent response patterns among subgroups of midpoint responders, across items with extreme scores at the midpoint of the left-right item. Therefore, using survey data from the AES and the American National Election Study (ANES), we conducted latent profile analyses on midpoint responders using a shortlist of items that visually demonstrated a midpoint bump when plotted against the left-right item, and when polynomial (non-linear) functions best fit the data.

[2] We use the term "bump" to refer to cases where y-axis scores are appreciably higher or lower for midpoint responders relative to scores for responders one point to the left or one point to the right of the midpoint. This creates a visual bump (higher) or dip (lower) when the left-right item (x-axis) is plotted against variables of interest on the y-axis. However, for simplicity we refer to all cases (bumps and dips) simply as bumps.

Bumps at the midpoint

A handful of studies have reported W-shaped plots when plotting the relationship between the left-right item and variables that broadly represent aspects of scepticism of authorities, governments and elites (Imhoff et al., 2022; Marques et al., 2022), and distrust of institutions (Toshkov, 2023). Marques et al. (2022), in a large representative New Zealand sample, found a W-shaped relationship between political ideology and conspiracy beliefs. The relationship was best fit by a fourth-degree polynomial function, such that conspiracy belief is higher among extreme left-right responders *and* midpoint responders (although extreme-right responders appear to be the most conspiratorial). Similarly, findings from Imhoff et al. (2022) plotting the left-right item against conspiracy mentality in data representing 23 countries (and again in 13 EU nations in a second study) also reported (visually) a similar midpoint bump, with midpoint scores appearing similar to the extreme left and extreme right. A re-analysis of this data by Enders et al. (2024), using a similar additive polynomial regression method to Marques et al., found that fourth-degree polynomial functions best fit the data, commensurate with Marques et al.'s findings on general conspiracy beliefs. Regarding trust in institutions, trust in European parliament and attachment to Europe among European citizens on the whole is *lower* on the midpoint than at the centre-left or centre-right among European Social Survey respondents (Toshkov, 2023).

Political knowledge is another variable in which the bump has been observed when plotted against the left-right item (De keersmaecker et al., 2024). Once again fitting a series of polynomial functions, relationships from 27 of the 45 nations sampled were non-linear. In most cases, midpoint responders scored lower on average for political knowledge than those placing

on the centre-left or centre-right points, and sometimes their scores were similar to those responding on either extreme of the left-right item. While low political knowledge is not the same as scepticism and distrust of governments and political institutions, low knowledge about politics could be a result of disengagement with the political system, or vice versa (Reichert, 2016).

One possible explanation for the midpoint bump could be that it is the result of midpoint responders who hold relatively consistent anti-establishment or populist attitudes. Someone with a populist tendency is likely to see the elite as corrupt and operating against the interests of ordinary people, and views politics as a vehicle for the "general will of the people" (Mudde, 2004, p. 543). We further explore this possibility below by discussing research into who self-places on the midpoint.

Unpacking midpoint diversity - Who responds on the midpoint?

Historically and across many democratic nations, the midpoint is the most popular response option on the left-right item (Converse & Pierce, 1970; Rodon, 2015), and as a group, midpoint responders are politically-heterogeneous (Fowler et al., 2023). The midpoint responder group probably includes those who do not know what the terms *left* and *right* mean (Converse & Pierce, 1970; Knutsen, 1998) and those with low political interest (Rodon, 2015). It also likely includes those who do not identify with, or see relevance in, *left* and *right* in modern society (Rodon, 2015), and those who hold a mixture of typically left- and right-wing attitudes (Treier & Hillygus, 2009).

One important group who may be more likely to endorse the midpoint on the left-right item is *populists*. Broadly, supporters of populism tend to have low political interest (Spruyt et al., 2016) and low political knowledge (Stanley & Cześnik, 2022). As populist parties attempt to brand themselves as beyond the politics of left and right and as representing the ordinary person (Betz & Johnson, 2004), populist party support may also drive midpoint self-placement, rendering *left* and *right* irrelevant descriptors. Some populist parties also take a mix of typically left- and right-wing stances depending on the political issue, such as an anti-immigration platform coupled with support for the welfare state (Fenger, 2018). Importantly for our investigation, populist supporters responding on the midpoint might explain the previously reported bumps on items measuring conspiracy belief (given that endorsement would be consistent with scepticism towards elites), distrust of political institutions, and also political knowledge.

The present research

Participants who respond at the midpoint of the left-right item may include both genuinely-moderate responders and people who have anti-establishment or populist tendencies – tendencies that are often associated with the political extremes (van Prooijen & Krouwel, 2019). The midpoint bumps may indicate that the left-right item fails to detect important political groupings that differ significantly on attitudes towards the political system (Uscinski et al., 2021). At a time in which establishment parties are losing support to populist and other movements (Guth & Nelsen, 2021), the single-item self-placement measure of left-right ideology

may not be fit for purpose when researchers wish to understand anti-establishment sentiment in particular (Santucci & Dyck, 2022).

Two aims guided our research. First, we aimed to further examine the prevalence of midpoint bumps by plotting the left-right item against items measuring attitudes toward several current social and political issues, as well as attitudes toward the political and democratic system. Second, we aimed to investigate a possible explanation for these bumps by determining whether multiple politically-meaningful sub-groupings exist within the midpoint response group. We therefore took items that demonstrated non-linearity at the midpoint of the left-right item, based on visual inspection of scatterplots and polynomial testing, and conducted latent profile analyses (LPA) solely on midpoint responders. LPA, as a type of mixture modelling, is a useful analytical technique in a situation in which one wishes to "recover hidden groups in observed data" (Oberski, 2016, p. 275). It categorises people probabilistically into unobserved groups based on their responses to a set of variables (Spurk et al., 2020). Following this, we examined whether the mean scores on bumped items of one particular group (or more) within the midpoint responder group is responsible for the bumps via their relatively extreme mean scores on those items.

We present the following research questions as a summary:

RQ1: When plotted against the left-right item, on which variables do midpoint bumps exist?

RQ2a: Can multiple meaningful profiles be identified within the midpoint response group, across these variables?

RQ2b: Does one or more of these emergent profiles account for bumps at the midpoint?

We used data from the AES (McAllister et al., 2019) and the ANES (American National Election Studies, 2021), which are two large-scale surveys that contain the left-right (liberal-conservative in the ANES) item, and items measuring attitudes to a range of social and political issues and political system attitudes. We chose the ANES as a comparison sample as this survey offers participants a "Don't know" option and a "Haven't thought much about this" response option to the liberal-conservative item, whereas the AES does not. If AES responders did not know where to place themselves, they could refuse to respond and skip the question, but may have felt pressure to respond on the scale when not presented with more suitable options (see Scholz & Zuell, 2016). Therefore, we might expect that so-called cognitive don't knowers (Rodon, 2015) are more likely to self-place on the midpoint in the AES survey given a lack of a clear alternative.

We stress that this research is exploratory and descriptive in nature, and should be seen as a useful first step toward developing an understanding of the complexity of midpoint response on the left-right item. Additionally, we do not propose any hypotheses.

Study 1: Assessing correlations between the left-right item and political attitudes

Study 1 examined the prevalence of midpoint bumps across a wider range of variables than what has been reported in the extant literature to date. We plotted the left-right item against our attitude items (see Table 2 for items and Figure 1 for plots, in the Results and Discussion subsection), using data from the 2019 wave of the AES. This survey was initially chosen for the simple reason that the first author is Australian. We then conducted polynomial tests on all of these bivariate relationships (detailed below). Polynomial testing allowed us to determine the

best-fitting polynomial function and tentatively draw conclusions regarding the presence of a midpoint bump. We also conducted the same analyses using the 2020 wave of the ANES (see Table 3 for items used and Figure 2 plots, in the Results and Discussion subsection).

Method

Sample and measures

The AES and ANES are large sample surveys (N = 2179 for AES; N = 8280 for ANES). The 2019 AES survey data was collected between 20/5/2019 and 30/9/2019 using a mix of online and hard copy survey formats. Data can be accessed at https://australianelectionstudy.org/voter-studies/. The 2020 ANES survey data was collected between 18/08/2020 and 3/11/2020 (pre-election survey) and between 8/11/2020 and 4/1/2021 (post-election survey), using a mix of internet, telephone and video interviews with participants. Data can be accessed at https://electionstudies.org/data-center/2020-time-series-study/. There were 652 midpoint responders in the AES and 1818 in the ANES.

AES left-right item. The AES left-right item is a single item measured on an 11-point scale, ranging from 0 (Left) to 10 (Right). We recoded this to range from 1 to 11 for all analyses. There are no other response options, and no other labels for response options. The text of the item is as follows: "In politics, people sometimes talk about the 'left' and the 'right'. Where would you place yourself on a scale from 0 to 10, where 0 means the left and 10 means the right?"

ANES liberal-conservative item. The ANES uses a 7-point scale to measure liberal-conservative self-placement. As previously mentioned, liberal-conservative anchor points are

commonly used for the self-placement item in U.S. research and opinion polling, as opposed to left-right. The item text is as follows: “We hear a lot of talk these days about liberals and conservatives. Here is a seven-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale, or haven’t you thought much about this?” Each scale response option is labelled as follows: 1 - Extremely liberal; 2 - Liberal; 3 - Slightly liberal; 4 – Moderate/middle of the road; 5 – Slightly conservative; 6 – Conservative; 7 – Extremely conservative. Participants can also indicate that they “Haven’t thought much about this” or “Don’t know”.

Correlated items. A full list of attitude items can be found in Tables 2 (AES) and 3 (ANES) in the Results and Discussion section below. We selected as broad a range of items as possible, initially from the AES, then we attempted to select similar items from the ANES. The AES is a relatively small survey compared to the ANES, with fewer items measuring political views and policy attitudes. Furthermore, some of these items are measured categorically and not on continua, so are unsuitable for plotting bivariate relationships. Some items are also context specific, such as how important the Royal Family is to Australia. We wanted to analyse similar items across the two surveys so we could reasonably compare the results to allow us to, as much as is reasonable, observe commonalities across contexts. This was not always possible, because either an equivalent item did not exist in the ANES or the response scale was categorical. We avoided items that overtly measured attitudes about the government in power at the time of the survey, as responses could be susceptible to partisan bias. Rather, we focused on items measuring attitudes to politicians and the political system generally. In summary, we plotted the left-right item against attitude items from the following domains: Immigration/race, crime and

punishment, gender equality (AES only), same sex marriage (AES only), conspiratorial thinking and corruption beliefs (ANES only), foreign relations and trade, climate change, drug law reform (AES only), income/wealth inequality, political engagement/scepticism, and attitudes to representative democracy.

Results and Discussion

Table 1 shows the prevalence of midpoint response option selection across the two samples.

Table 1. Percentages of left-right response option selection for the AES and ANES. Percentages excluding non-left-right response options in parentheses.

Response options	**AES (N = 2179)**	**ANES (N = 8280)**
Midpoint	30% (31%)	22% (26%)
Left-of-midpoint options combined	32% (34%)	30% (35%)
Right-of-midpoint options combined	33% (35%)	33% (39%)
Don't know	Option not offered	<1%
refused/skipped	4%	<1%
Haven't thought much about this	Option not offered	15%

Analytic strategy

Our first goal was to generate scatterplots for the bivariate relationships between our attitude items and the left-right item. To do this we used RStudio version 2021.9.2 (RStudio Team, 2010/2022) and the *geom_smooth* function using "loess" method in the *ggplot2* package (Wickham, 2016), which adds a LOESS (Locally estimated scatterplot smoothing) trend line. Shaded areas around the line represent a 95% confidence level. We then gave our best judgement

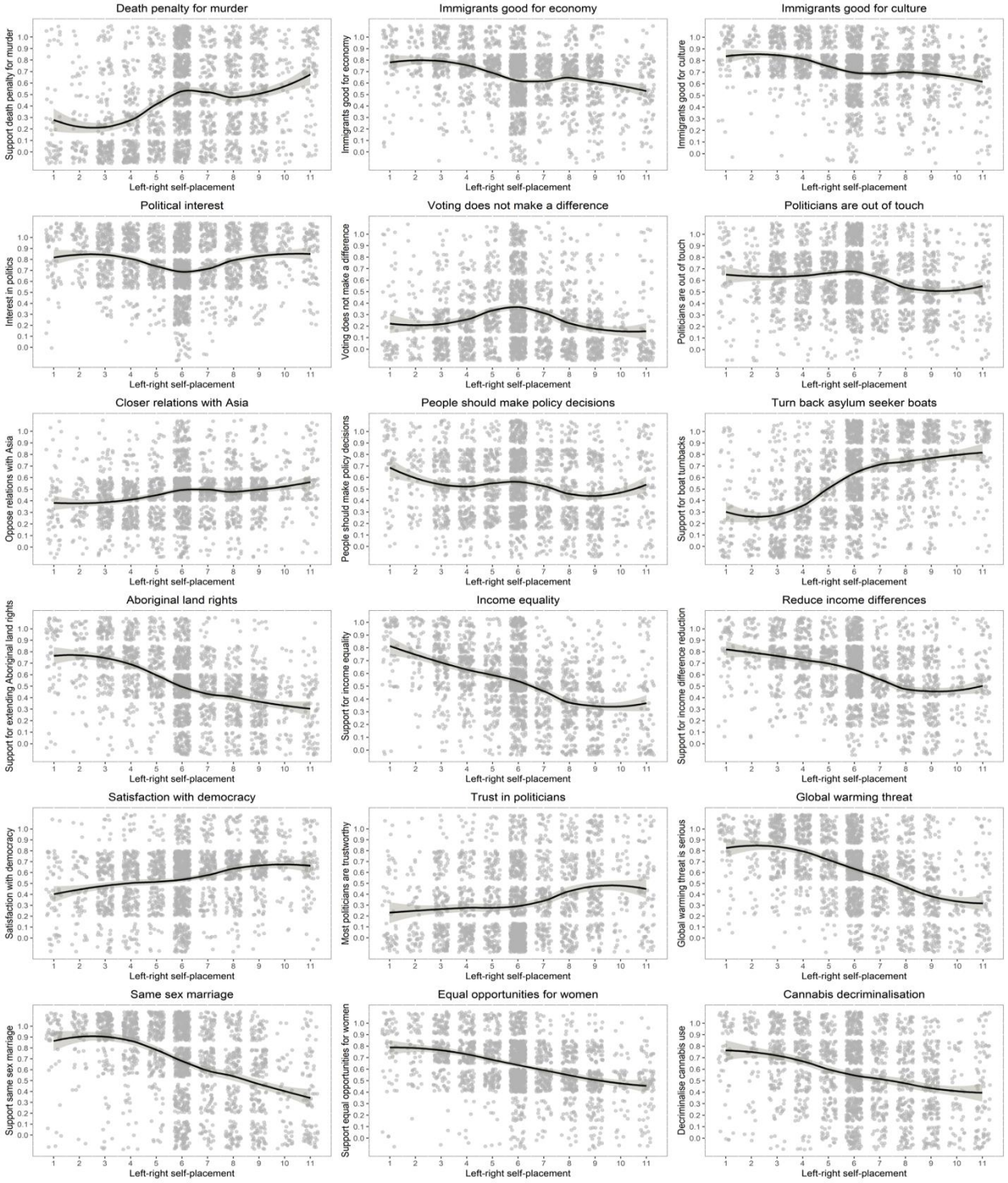
as to whether the trend line indicates a bump at the midpoint based on visual inspections. We report our judgements, simply recorded as *Yes* or *No*, in tables 2 and 3.

To support claims from visual inspections that the plot between a given political attitude item and the left-right item is indeed bumped at the midpoint, we sequentially added polynomials to a regression model for each bivariate relationship. Enders et al. (2024) suggest that a W-shaped relationship would be best modelled by a fourth-degree polynomial term, to represent the three changes in direction that could indicate a midpoint bump. However, a polynomial equation can of course better fit the data than a linear equation due to changes in direction at any points of the left-right item, for instance at the extremes of the scale. This is why it is important to consider both the polynomial tests and visual inspections in conjunction. We used a Lagrange Multiplier test to assess the best-fitting model, as in Marques et al. (2022). Taking this approach means that the higher order term captures variance that is not explained by a lower order term (De keersmaecker et al., 2024), and the Lagrange Multiplier tests yields a significance test to determine whether a higher order function explains a significantly larger amount of variance than the lower order function (see supplementary materials for complete test results).

"Bumped" items and polynomial test results

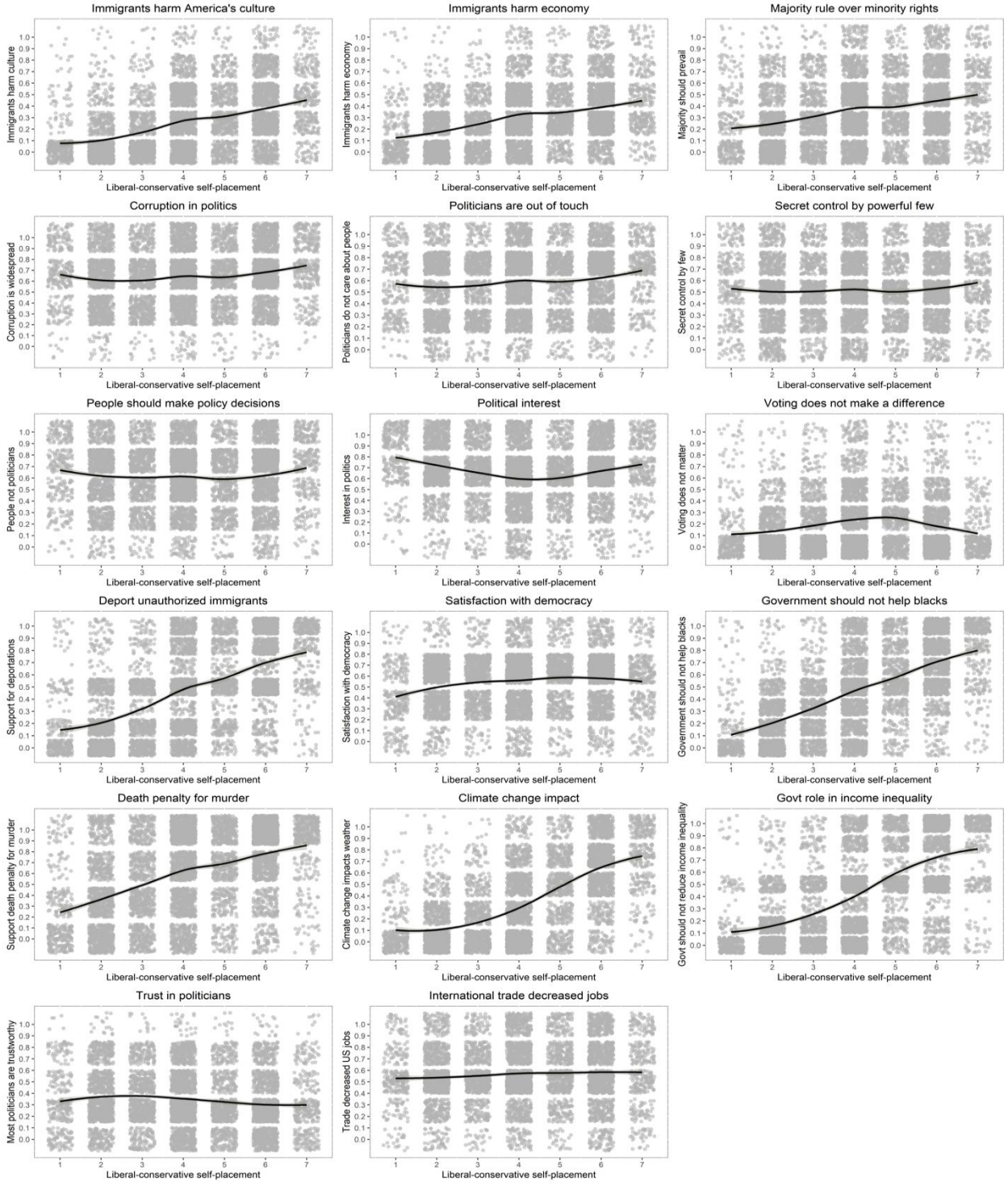
Figures 1 (AES) and 2 (ANES) contain the scatterplots for the selected items. All Y-axis items were standardised to a 0 to 1 range, to assist visual comparisons across items.

Figure 1. Scatterplots of relationships between left-right item and selected attitude items, with LOESS trend lines (AES data).



Note. The shaded area represents the 95% confidence level for the trend line.

Figure 2. Scatterplots of relationships between the left-right item and attitude items, with LOESS trend lines (ANES data).



Note. The shaded area represents the 95% confidence level for the trend line.

Tables 2 and 3 list the items inspected across both samples, the best-fitting polynomial function and variance explained (R^2), and our judgement as to whether a midpoint bump exists in the polynomial plots. We provide the complete item wording for each item in the supplementary materials (Tables S1 and S2). These judgements are naturally subjective, so we refer readers back to the plots in Figures 1 and 2 to judge for themselves. The bump appeared to occur at both the midpoint, and the point to its right in two cases in the U.S. data, which we note in parentheses. We present the full polynomial test results for each item in the supplementary materials.

Table 2. AES data. Items plotted against left-right item, with best-fitting model, R^2 value (in parentheses) and whether midpoint bump is visually noticeable.

Item	**Best-fitting model (R^2)**	**Midpoint bump?**
Death penalty for murder	Quartic (.12)	Yes
Immigrants good for economy	Quartic (.09)	Yes
Immigrants good for culture	Quartic (.09)	Yes
Political interest	Quartic (.07)	Yes
Voting does not make a difference	Quartic (.07)	Yes
Politicians are out of touch	Quartic (.05)	Yes
Closer relations with Asia	Quartic (.04)	Yes
People should make policy decisions	Quartic (.03)	Yes
Turn back asylum seeker boats	Quartic (.27)	No
Aboriginal land rights	Quartic (.22)	No
Income equality	Quartic (.19)	No
Reduce income differences	Quartic (.15)	No

Satisfaction with democracy	Quartic (.06)	No
Trust in politicians	Quartic (.05)	No
Global warming threat	Cubic (.24)	No
Same sex marriage	Cubic (.20)	No
Equal opportunities for women	Cubic (.15)	No
Cannabis decriminalisation	Cubic (.10)	No

Table 3. ANES data. Items plotted against left-right item, with best fitting model, R^2 value (in parentheses) and whether midpoint bump is visually noticeable.

Item	**Best fitting model (R^2)**	**Midpoint bump?**
Immigrants harm culture	Quartic (.18)	Yes
Immigrants harm economy	Quartic (.14)	Yes
Majority rule over minority rights	Quartic (.08)	Yes
Corruption in politics	Quartic (.02)	Yes
Politicians are out of touch	Quartic (.02)	Yes
Secret control by powerful few	Quartic (.01)	Yes
People should make policy decisions	Quartic (.01)	Yes
Political interest	Quartic (.05)	Yes (but also centre-right)
Voting does not make a difference	Quartic (.04)	Yes (but also centre-right)
Deport unauthorized immigrants	Quartic (.32)	Yes
Satisfaction with democracy	Quartic (.03)	No
Government should help not blacks	Cubic (.39)	No
Death penalty for murder	Quadratic (.21)	Yes
Climate change impact	Quartic (.42)	No
Govt role in income inequality	Cubic (.36)	No

Trust in politicians	Cubic (.01)	No
International trade decreased jobs	Linear (.01)	No

Polynomial tests indicated that the best-fitting function was quartic in every case where a midpoint bump is visible in the scatterplot (except for "death penalty for murder" in the ANES data), supporting our visual inspection judgements. Based on the findings from both samples, bumps exist on items representing attitudes towards immigrants, political interest and engagement, attitudes towards politicians and government, political corruption, preference for majority rule over minority rights, and on belief that people should make the important policy decisions rather than politicians. Our findings are broadly consistent with past research which reported that midpoint responders appear more sceptical of politicians, elites and institutions, relative to centre-right and centre-left responders (Enders et al., 2024; Toshkov, 2023). By also identifying W-shaped relationships between the left-right item and responses to items measuring attitudes towards immigrants, our findings demonstrate that midpoint mean scores are not only (relatively) extreme for anti-establishment attitudes. If our argument that supporters of populism self-place on the midpoint has merit, then it is reasonable that midpoint bumps exist on these items as well, as support for immigration bans is a feature of populism in Australia (Sengul, 2020) and the U.S. (Joppke, 2020). Put together, the presence of bumps in these domains strengthens the argument that at least some midpoint responders may tend towards holding anti-establishment and populist attitudes, thereby raising the midpoint mean score on relevant items.

Study 2a: Uncovering hidden political profiles within the midpoint response group

Study 1 provided us with the scope of midpoint extremity in Australia and the U.S., and added evidence to the suggestion that an unobserved anti-establishment or populist subgroup (or subgroups) may be responsible. To further explore this possibility, we sought to determine whether hidden subgroups of midpoint responders exist and can be detected by their response patterns across bumped items. To do this, we conducted Latent Profile Analyses (LPAs) on the midpoint responders, for both samples, using selected bumped items identified in Study 1. Based on the profiles that were identified via the pattern of responses on these items, we had the opportunity to provide a description of midpoint political heterogeneity.

Method

Item selection for LPA

To aid interpretation of the latent profiles, we selected items from the item pool that we identified as bumped and which best fit a quartic function when plotted against the left-right item. We aimed to maintain representation of our broad issues categories and ensure a high level of item and response option equivalence across the AES and ANES. We included the following items: Immigrants are good for (harm) the economy, immigrants are good for (harm) culture, political interest, politicians are out of touch, voting does not make a difference, and people should make policy decisions.

Latent Profile Analyses

LPA is a form of finite mixture modeling that groups datapoints according to response profiles on a given set of continuous variables. LPA returns a likelihood with which the participant can be associated with each profile. A main challenge of conducting LPA is identifying the number of profiles and setting up appropriate variance-covariance specifications. The number of profiles should represent the structure of the data well but should also be parsimonious enough to be interpretable (e.g., avoiding solutions with very small profiles). The variance-covariance specifications should be set with enough restrictions to the model so that solutions converge and are reliable but do not become oversimplified (S. K. Johnson, 2021).

Based on a practical guideline for the correct model selection procedure in LPA (S. K. Johnson, 2021), we followed a stepwise approach to determine the most adequate profile solution. First, we used the six items selected above to calculate the most prevalent variance-covariance specifications across 1- to 4-profile solutions with 1000 initial random starts and 200 best sets. Accordingly, we calculated the six variance-covariance specifications across one to four profiles, resulting in a total of 24 profile solutions. Second, these 24 profile solutions were then rerun with ten times the number of random starts. This was done to compare the loglikelihood of the recalculated models with the original models. A stable loglikelihood reduces the likelihood for any convergence issues or local maxima (i.e., a suboptimal model configuration identified as optimal). Models that did not converge or which did not replicate their loglikelihood were dropped. Third, we evaluated the Bayesian information criterion (BIC) and the sample-adjusted BIC to determine the best model fit across the remaining models. The

analysis was conducted using the R package tidyLPA (Rosenberg et al., 2019), together with MplusAutomation (Hallquist & Wiley, 2018) and Mplus 8.1 (Muthén & Muthén, 2017).

Results & Discussion

Latent Profile Analysis results

Table 4 provides an overview of the selected solutions in the respective data, including the specification of variance-covariance restrictions, number of profiles, model fit, entropy (a measure of accuracy of profile assignment, see Wang et al., 2017), and smallest profile proportion (for complete LPA output see https://osf.io/g3b2w/?view_only=3cf9f2ebd0d447a5840674aac3a93b23). Figures 3 and 4 provide an overview of the profile solutions based on the latent means, for the Australian and U.S. data respectively. The discovery of multiple profiles across both samples lends weight to the midpoint heterogeneity argument, as the analysis was able to draw commonalities in responses on these items among midpoint responders and based on this sorted them into distinct groups.

Table 4. Latent Profile Analysis results for the AES and ANES data.

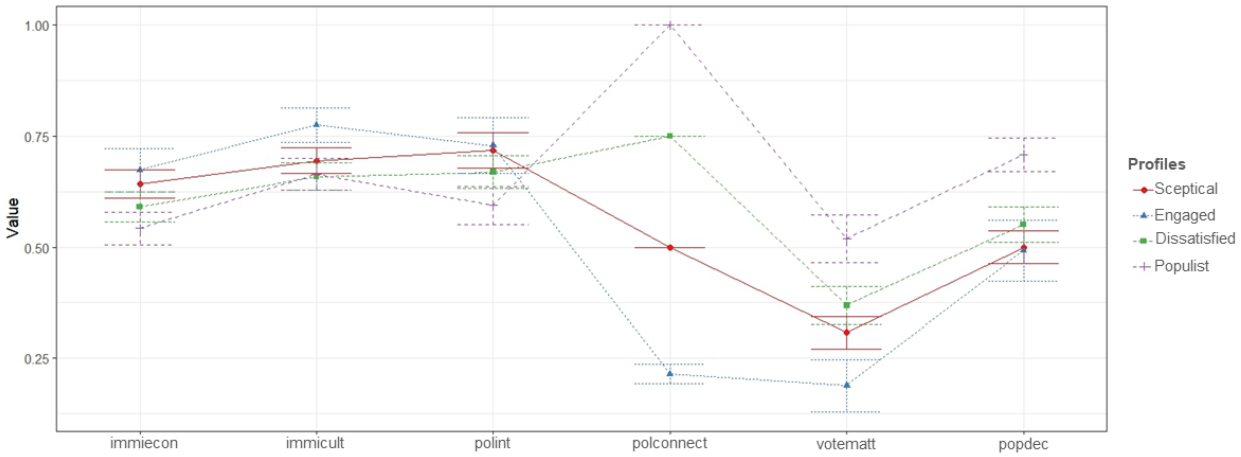
Data	Restrictions between models	Number of Profiles	LogLik	BIC	SABIC	Entropy
AES (Australian)	Variances equal Covariances equal	4	-4419.14	9146.60	8994.21	1
ANES (U.S.)	Variances equal Covariances equal	3	-12783.4	25869.5	25739.25	.91

Note. The analysis found perfect entropy (= 1) in the Australian data, indicating perfect profile assignment accuracy.

A four-profile solution was the most adequate for the Australian data (Figure 3). One profile, which we labelled "Populist" (*n* = 198, 32%), represents respondents with the lowest political interest and political efficacy (belief that voting does not matter, and that politicians are out of touch), and highest belief that the public and not politicians should make important policy decisions, compared to all other profiles. These attributes, particularly that politicians are out of touch with regular people and that the public is better placed to make decisions (will of the people), are consistent with those of populism as defined by Mudde (2004). The relatively high anti-immigrant attitudes found in this profile are also consistent with many populist movements (Fenger, 2018). While there is some overlap between the profiles on the attitudes towards immigrants items, the populist profile has significantly stronger anti-immigration stances than the "Engaged" (*n* = 69, 11%) responders. We labelled this profile "engaged" particularly for their scores on the two political efficacy items, indicating that they believe voting can make a difference and that politicians care about what ordinary people think (relative to the other

profiles). The other profiles broadly score somewhere in-between the populist and engaged profiles. We labelled one profile Sceptical (*n* = 181, 29%) because while they maintain a relatively high interest in politics and low belief that people (rather than politicians) should make important policy decisions, they do score somewhere in the middle on belief that voting matters and that politicians are out of touch. On the other hand, the group we labelled "Dissatisfied" (*n* = 168, 27%) lean closer to our populist profile in relation to political system attitudes, and may therefore hold some dissatisfaction with the political status quo. However, they overlap with the engaged and sceptical profiles on belief that people should make policy decisions, holding a more moderate position on this item.

Figure 3. Latent profile plot (AES data)



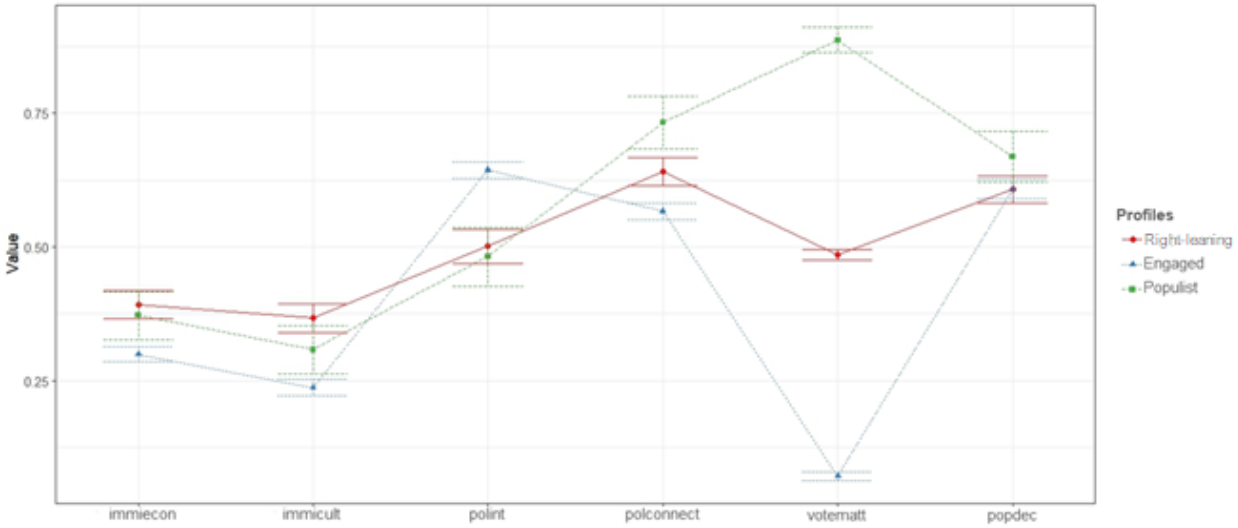
Note: immiecon = immigrants good for economy, immicult = immigrants good for culture, polint = political interest, polconnect = politicians are out of touch, votematt = voting does not make a difference, popdec = people should make policy decisions.

A three-profile solution was the most adequate for the U.S. data (Figure 4). Despite the larger sample size, the latent profile analysis suggested one fewer profiles than for the Australian

data. This might be due to the ANES survey offering participants non-scale response options for the liberal-conservative item, which may reduce the number of respondents self-placing on the midpoint as a de facto "don't know" response, thereby decreasing potential midpoint heterogeneity. Additionally, the midpoint response option is labelled *moderate/middle of the road*, which may dissuade some who do not identify with these labels from placing there. The AES survey does not provide a midpoint response option label.

Almost identical to the Australian data, the profile we labelled "Populist" (n = 165, 10%) has both the lowest levels of political efficacy and highest belief in the will of the people. On attitudes toward immigrants and political interest, this profile is distinct from our "Engaged" (n = 1139, 71%) profile on attitudes towards immigrants and political interest, but overlaps with the red-lined profile, which we labelled "Right-leaning" (n = 304, 19%). We labelled this profile "Right-leaning" because they score roughly equal on political interest to the engaged profile and are not as politically-sceptical as the populist profile, but they have relatively negative attitudes towards immigrants. In fact, they score the highest on belief that immigrants harm America's culture. The engaged profile has the most positive attitudes towards immigrants, the highest political interest and highest political efficacy. As with the Australian data, the political efficacy items measuring belief that politicians are connected to regular people and that voting makes a difference best separate the classes.

Figure 4. Latent profile plot (ANES data)



Note: immiecon = immigrants harm economy, immicult = immigrants harm culture, polint = political interest, polconnect = politicians are out of touch, votematt = voting does not make a difference, popdec = people should make policy decisions.

Profile mean differences across all attitude items

Our interpretation of the profiles, and thus the profile labels we assigned, was based on the pattern of LPA results alone. We were able to compare the mean scores of these profiles across all attitude items from Study 1, to examine whether these profile interpretations hold in related and different domains. We therefore conducted a series of one-way ANOVAs on the attitude items, with pairwise comparisons using Tukey's HSD. Pairwise comparison results along with the means and standard deviations for each latent profile are contained in Table S3 (supplementary materials). We provide a description of the major findings below.

Interpretation of the pattern of results

Group differences across items that were not used in the LPA are remarkably consistent for the AES data. Populist profile mean scores relative to other profiles are the lowest for satisfaction with democracy and trust in politicians, while they are the highest for death penalty support, belief that building closer ties with Asia has gone too far, and that the government should reduce income differences and reduce inequality. There were no group differences for items that were not best fit with a quartic function when plotted against the left-right item, except for support for cannabis decriminalisation. Overall, this pattern of results is consistent with the argument that a populist profile exists on the midpoint and supports the interpretation of the LPA profile solution. Populists would be expected to have lower satisfaction with democracy (Brause & Kinski, 2024), to be sceptical of economic and cultural ties to Asia (in the Australian political context; C. Johnson, 2018), and to be relatively more supportive of government intervention to reduce income inequality, perhaps because they view the system as unfair to them (Oxendine, 2019).

The ANES pattern of results is more complicated. Populist profile mean scores are higher on conspiracy belief and that corruption among politicians is widespread, which is consistent with populist belief in a corrupt elite (Mudde, 2004). This group is also the lowest on scores for trust in politicians and satisfaction with democracy. However, the right-leaning group scored the highest for belief in majority rule over minority rights. Support for deporting unauthorised immigrants, belief that climate change is not having an impact, and support for the death penalty for murder, is roughly equal for the populist and right-leaning groups. In sum, the major conceptual differences between the right-leaning and populist profiles are in the levels of

scepticism towards the political system and elites (populists being more sceptical), and the effect of immigrants on culture and belief in majority rule over minority rights (right-leaners being more concerned about minority threat). Importantly, there is a consistent difference between the populist profile and the engaged profile across most issues, and particularly for anti-establishment, anti-elite, and anti-immigration attitudes.

The significant pairwise differences across both samples largely support the LPA results and thus the argument that at least some people with consistent anti-establishment and populist attitudes select the midpoint response option. With this, we offer an answer to our second research question: multiple profiles likely exist within the midpoint response group, for both Australia and the U.S, with one profile standing out as populist.

Study 2b: Are the midpoint bumps the result of extreme populist profile mean scores?

In order to explore whether populist profile scores on our selected items account for the midpoint bumps, we created replications of the plots displayed in figures 1 and 2, for only those items that we used in the latent profile analyses. We provide multiple LOESS trend lines showing the effect of removing one midpoint profile on a smoothed curve estimating the relationship between the left-right item and the given political attitude, for both datasets. We removed the data points from the plots to simplify the visual presentation.

Figure 5. LOESS trend lines of relationships between left-right item and selected issues items, when each profile is removed from the midpoint (AES data).

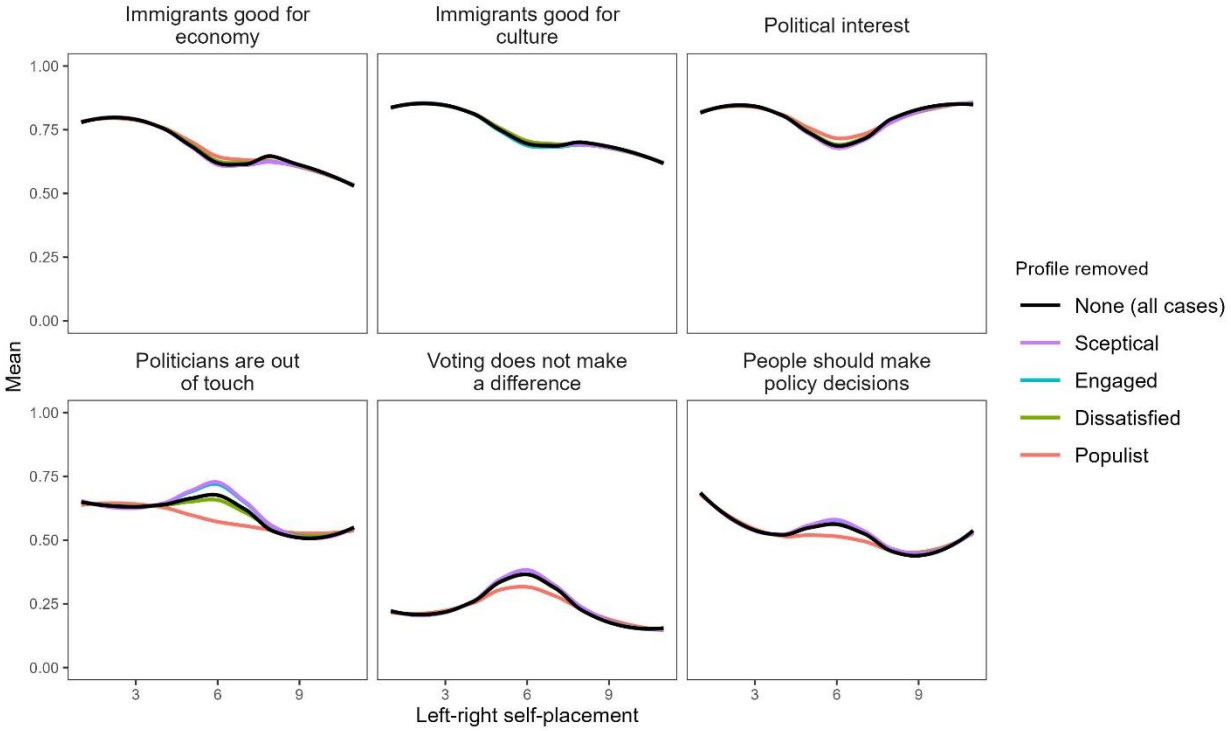
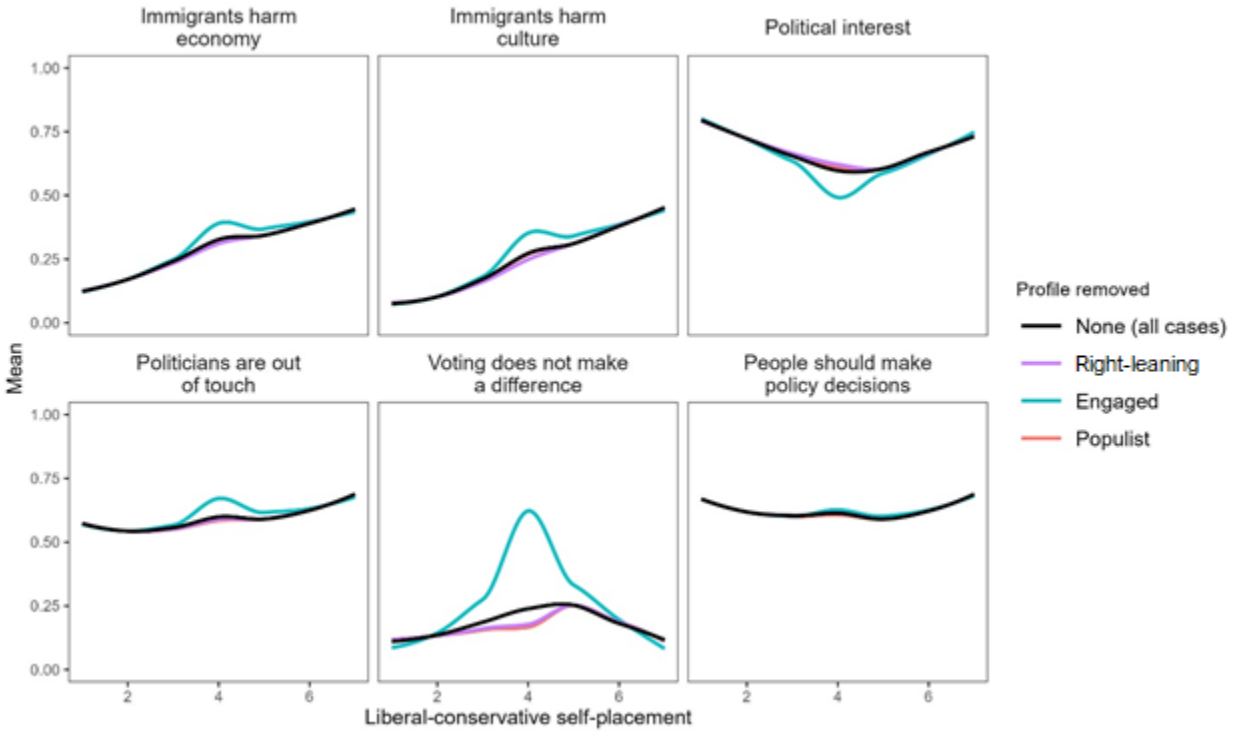


Figure 5 shows visually that removing the populist profile from the midpoint reduces, but does not eliminate, the nonlinearity in the trend line for the belief that politicians are out of touch, that voting does not make a difference, and that people should make policy decisions. In the case of the latter, the trend line looks more like a U-shape, with the highest support coming from the extreme ends of the spectrum (but more so left than right). The nonlinearity reduction is smaller for belief that immigrants are good for the economy, and political interest. There appears to be no effect on the trend line when removing the populist profile for belief that immigrants are good for culture.

Figure 6. LOESS trend lines of relationships between left-right items and selected issues items, when each profile is removed from the midpoint (ANES data).



Due to the relatively small number of responders in the populist profile, the trend line when this profile is removed is difficult to visualise (see Figure 6). It is therefore easier to note what happens to the line when the engaged profile is removed. In every case, except for the item measuring belief that people should make policy decisions, the midpoint bump is exaggerated by eliminating the engaged profile. This shows that the relationship between the liberal-conservative item and five of the six attitude items, visually, becomes more nonlinear when the midpoint only consists of populist and right-leaning responders.

The populist profiles across the two samples (and the right-leaning profile in the ANES sample) influenced the overall mean score of the midpoint group to result in a bump across these items, in most but not all cases. This is in contrast to the engaged class, which based on their mean scores on many of these items, would represent scores roughly consistent with linear or U-shaped trends when plotting the left-right item against these aforementioned variables. Although this profile is a particularly large proportion of the entire midpoint response group in the U.S. sample, the other profiles influence the mean score on the selected items to the point that bumps present.

General discussion

The left-right item receives its share of criticism, from concerns that it does not adequately represent ideologies relevant to most people (Kitchelt & Hellemans, 1990), to poor cross-national equivalence (Zuell & Scholz, 2019). Another concern is that it is orthogonal to an increasingly relevant dimension – anti-establishment attitudes (Uscinski et al., 2021). Although the extreme ends of the left-right orientation spectrum have received attention as exhibiting similarities in system-level beliefs (Krouwel et al., 2017), the midpoint has largely been ignored in this research despite evidence that some with relatively extreme anti-establishment beliefs may self-place there (Enders et al., 2024).

Our research provides further reason to consider that the left-right item is masking important political differences. We described the prevalence of extreme midpoint scores across a range of attitudes, using two large sample surveys (AES and ANES), suggesting that the relationship between the left-right item and many anti-elite, anti-establishment and anti-

immigrant attitudes can be better described as W-shaped than linear or U-shaped. Extrapolating from this collection of variables, as well as past research on what motivates midpoint self-placement, we explored the possibility that the extreme left and right are not the only extremes on the ideological spectrum. We conducted latent profile analyses on midpoint responders using a smaller pool of items that were highly equivalent across the two surveys (Study 2). Four latent profiles best described the midpoint responders in the Australian data, and three in the U.S. data. In both samples we uncovered a profile that, based on patterns of scores across the items, could be described as populist. The populist profile accounted for 32% of midpoint respondents in the Australian data, and 10% in the U.S. data. We then examined mean differences between these profiles and the rest of the items from Study 1, concluding that the pattern of results from the LPAs were largely consistent, with some exceptions, across items not used in the LPA.

We then generated a number of LOESS trend lines for the relationships between the left-right item and the six items used in the LPAs, each representing the effect removing a profile would have to the overall trend. In most cases, the relationships between the left-right item and our selected variables exhibiting midpoint bumps are linear or U-shaped when the populist profile mean scores (and the right-leaning profile, in the ANES sample) are removed, demonstrating the effect of the populist profile.

Implications of midpoint heterogeneity

The left-right item is hiding important midpoint political diversity, and in particular, relatively extreme anti-system beliefs that have been considered characteristic of the far-left and right (Krouwel et al., 2017). This discovery appears especially important given the increasing presence of populism in contemporary politics, which may be difficult to measure with an over-

reliance on a tool that conflates the left-right spectrum with attitudes toward the political system (Uscinski et al., 2021). It also implies that, while some responders on the extreme left and right, and the midpoint, share anti-establishment beliefs, there are potential qualitative differences between these responders that should be investigated. Indeed, it is in itself useful to understand why some who are sceptical of the political system and hold anti-immigrant attitudes may self-place on the midpoint instead of the extreme right, for instance. One approach might be to measure anti-establishment beliefs as a separate ideological dimension, in order to compare its ability to predict variance in social and political attitudes relative to the left-right item.

Our findings are potentially relevant for research wishing to better understand the psychological underpinnings of ideological extremism. So far research has highlighted psychological similarities only among extreme left and right responders, in the domains of cognitive rigidity, dogmatism and intolerance (Brandt et al., 2014; Burger, 2024; van Prooijen & Krouwel, 2017). It may be worth applying the additive polynomial regression method in these domains, when there is a sufficiently large sample to fit these functions, to determine whether a U-shape or a W-shape function better-fits relationships between these and the left-right item. Perhaps dogmatism and cognitive rigidity can also be found on the midpoint when not masked by midpoint sub-group conflation. Indeed, it may make sense to consider non-linear models *whenever* researchers wish to examine relationships between political orientation and other attitudes or psychological attributes.

Limitations and Future Directions

The aims of this research were modest, and our hope is that this formative work provides a platform for more in-depth (i.e. establishing clearer distinctions between midpoint responder classes) and broader (i.e. cross-national) research. A clear limitation of our research was its focus on two Anglophonic nations. Although the left-right item is perhaps less applicable as a measure of ideology in non-Anglophonic and Western European nations broadly (e.g., Wojcik et al., 2021), which is a significant problem for its use, it is nonetheless important to examine midpoint heterogeneity in contexts where it is (e.g., Europe), using nationally-representative datasets.

Another limitation is that our analyses were limited by the items available in the AES, which is a relatively small survey. We are also extrapolating from single item measures of various political and social attitudes to make claims regarding the presence of a populist supporter group. One way to further test the claim that supporters of populism are responsible for the midpoint heterogeneity is to simply use valid measures of populist beliefs or anti-establishment tendencies by which to distinguish midpoint responders.

We also note that our profile labels may be overinterpreting the patterns uncovered in the LPAs. It is impossible to determine, based on group mean scores on issues items, whether many midpoint responders are simply cognitive don't knowers, perceive left and right as irrelevant, or are cross-pressured (hold left and right positions on various issues). At a minimum, relative levels of political engagement and attitudes towards the establishment seem to vary on the midpoint considerably.

As alluded to earlier, attempting to disentangle anti-establishment tendencies that belong to the left, right and midpoint may provide a nuanced ideological perspective to the types of

change different groups who hold anti-system attitudes want. Midpoint populists apparently reject left and right categorisations. Why this is the case, and how malleable this midpoint positioning is, warrants further investigation.

Conclusion

Our research posits the possibility that people with relatively anti-establishment and anti-immigrant attitudes self-place on a point along the left-right item that is considered to represent moderation. We stress the need for further research into this ideological measurement issue, specifically to examine its cross-context prevalence as well as the use of better midpoint grouping distinguishers (for instance, the use of items from a valid populism or anti-establishment belief scale). Nonetheless, our research alludes to fundamental problems with ideological conceptualisation and measurement. Although some of these measurement concerns are not new, and the issue of what can be assumed about midpoint response has been investigated in past research, our findings add to this list of problems. It also suggests that some people who may reject the status quo do not themselves identify with the status quo-rejecting ends of the political spectrum, whether they be progressive (left) or reactionary (right). The specific issue of midpoint heterogeneity, and specifically the presence of groups that range from pro- to anti-establishment and preference for liberal democratic systems, is of significant relevance in an era of decreasing support for old and established political parties. The left-right item is unable to measure a key dimension on which the axis of modern politics is increasingly revolving around.

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