Introduction to the issue in honor of Keith T. Poole

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I am pleased to present 15 papers in honor of Keith T. Poole to the readers of *Public Choice*. The papers are preceded by an edited version of remarks at the May 2017 conference honoring Keith on his 70th birthday.

Organizing this introduction was difficult. To their credit, the papers vary by methodology, by geographic area, and by such substantive topics as polarization and mass-elite congruence. Thirteen papers draw their data either from roll call votes, campaign contributions, or surveys; two report experiments. The diversity attests to Poole's influence. I have made uncomfortable choices about a serial ordering of this diverse portfolio. I hope that I have encouraged the reader to pursue the papers directly.

It is fair to say that Keith Poole's most recognized work centers on NOMINATE (and D-NOMINATE, W-NOMINATE, and DW-NOMINATE). By far Keith's most cited work, on the basis of Google Scholar, is Poole and Rosenthal's (1997) book *Congress: A Political Economic History of Roll Call Voting* and its second edition, *Ideology and Congress* (Poole and Rosenthal 2007). The next largest citation counts go to two articles in the *American Journal of Political Science* (Poole and Rosenthal 1985, 1991) that were the precursors of *Congress* and to NOMINATE-based *Polarized America*, coauthored with McCarty et al. (2005).

The visibility of NOMINATE owes much to the public good that Poole provided through the website voteview.com where NOMINATE scores and their underlying data were placed in the public domain. A *voteview* software package, available only for WINTEL platforms, allowed for graphic displays and searches.

This special issue starts with the exposition of voteview.com.ucla.edu by Jeffrey Lewis, Aaron Rudkin, Adam Boche and Luke Sonnet. Long in the making, the new *voteview* runs on the internet and does all that was possible in the old *voteview* and much, much more. Roll call data are updated daily. DW-NOMINATE scores are updated frequently. *Voteview.com* will continue NOMINATE well beyond the retirement of its creators.

NOMINATE is centered on dichotomous choice. The same is true for Poole's (2000) Optimal Classification method. Legislators vote yea or nay. Abstention is tossed away as missing data; out-of-sight, out-of-mind. Ignoring abstention is inconsequential for scaling the US Congress for at least the past 5 decades. In contrast, abstention may be a meaningful third choice in many other legislative bodies. An example is the United Nations General Assembly, where abstention is a milder form of disapproval than a nay vote.

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The General Assembly is the subject of the article by Michael Bailey and Erik Voeten. In one of the first applications of NOMINATE to a legislature other than Congress, Voeten (2000) combined abstentions and Nay votes into a single category of opposition to Yea. The early work was limited further by not having dynamic estimates of ideal points. Bailey and Voeten address both limitations with a dynamic ordinal model. The dynamics are enabled by using multiple votes on identical UN resolutions. Parallel to the work on Congress, they find a stable first dimension in the United Nations. A second dimension fluctuates in relevance and substantive interpretation. Unlike legislators in Congress, nations do not die in their ideological boots, but move substantially with such historical events as the end of the Cold War.

Another approach to ordinal choice appears in the Ordinal Optimal Classification piece by Christopher Hare, Txi-Pi Liu and Robert Lupton. This is a nifty generalization of Poole's OC method; with hindsight, one wonders why it took from 2000 to 2018 to take that important next step.

Poole's Optimal Classification assigns spatial coordinates to choosers and hyperplanes to choices to minimize the number of classification errors—choosers on the Yea side of a hyperplane who vote Nay and vice versa. Hare, Liu, and Lupton allow the choices to be multichotomous, as with a seven-point Likert scale. Many dimensions are possible. However, the basic insight comes from thinking of a two-dimensional space with a trichotomous choice. Just as a dichotomous choice can be represented by a line that cuts the space into Yea and Nay regions, a trichotomous choice can be modeled by two parallel lines that cut the space into three regions, say yea, abstain, and nay. When the space contains many votes with different angles, a chopped-up area of small polygons, a.k.a. a Coombs mesh, emerges. For a fixed mesh, Optimal Classification places each chooser (survey respondent or legislator) into a polygon that minimizes classification errors. That approach is just as in Poole's procedure. For a fixed set of chooser placements, the optimal classification problem is to find the lines that minimize classification errors. Here, the authors nicely exploit the restriction to parallel lines. Hare, Liu and Lupton apply their non-parametric procedure to the Likert scales commonly used in public opinion research. They argue that the rigid assumptions of parametric models of roll call scaling may not be appropriate for public opinion data where the choosers can be highly idiosyncratic.

Nicholas Haas and Rebecca Morton are concerned directly with Likert-scale responses being particularly cheap talk. They address that concern with a study in which participants evaluate a set of ten policy issues by two treatments. One is Likert scales. The other requires participants to divide a monetary donation between two ideologically polar interest groups, such as the National Rifle Association and the Coalition to Stop Gun Violence. While Haas and Morton find interesting and significant distinctions between those two ways of measuring preferences, enough similarity in ideal point estimates emerges across the two methods to encourage the use of Likert scales in research. The Haas–Morton scaling uses the multinomial model of Hill and Tausanovitch (2015).

In their own contribution to this issue, Hill and Tausanovitch use the multinomial model to study the effect of the Southern realignment on polarization in the US Congress. Just as Bailey and Voeten used repeated votes to tie down the dynamics of the United Nations, Hill and Tausanovitch use repeated questions to study polarization, a key issue in American politics. They argue that polarization is driven by the ideological sorting of primary electorates. The process started in the South and extended to primary elections nationwide.

Sorting and polarization also are addressed in an ambitious paper by Devin Caughey, James Dunham and Christopher Warshaw. Two decades ago, a prevailing view in political science was that elites were polarized, but the mass public was not. A clear data-driven

example appears in figure 1 of my essay on Keith Poole in this issue. Caughey, Dunham and Warshaw argue that the evaluation of mass public polarization is distorted by aggregating data to the national level. At the level of states, publics, separated into Democrats and Republicans, have become just as polarized as their senators. They reach that conclusion by comparing scaling of Senate roll call votes with mass public scaling of over one million responses to public opinion polls from 1946 to 2014. Rather than addressing a general liberal-conservative dimension, they distinguish between economic, racial and social issues. They find that partisan divergence has increased at the state level as it has in Congress. The three issue areas increasingly have become correlated, echoing the collapse of the second dimension in DW-NOMINATE. Moreover, how issues impact state publics has become more national and less local in substance.

Repeated questions likewise are used in the study of dynamics in Congress by Brandon Marshall and Michael Peress. The dynamics, including changes in polarization, available through DW-NOMINATE are limited to linear changes in ideal points over time. Marshall and Peress obtain more flexible dynamics by using legislators' responses to questions in the National Political Awareness Test, augmented by expressed policy positions of legislators who did not respond. The data are bridged by assuming that the cutting line is not changed for questions that are repeated multiple times across the election cycles from 1992 to 2016. The bridging assumption permits ideal points to move in a non-linear way across Congresses.

The approach of Marshall and Peress provides ideal point estimates that closely resemble those of DW-NOMINATE. There are, however, important differences. DW-NOMINATE finds that most of polarization has occurred by a rightward movement of Republicans, with that movement induced by replacement of moderates by more conservative members. Marshall and Peress confirm that finding for Republicans, but report that Democrats also have polarized, not by replacement, but by leftward movement of incumbents over time. The authors also present interesting results about the congruence of legislator positions with the positions of their constituents, including how congruence is mediated by the competitiveness of the district and individual retirement decisions.

Jamie Carson and Ryan Williamson bring challengers into the picture. They are able to include challengers as well as incumbents by drawing on the campaign finance (CF) score estimates of candidate ideal points found in Bonicas (2014).

Carson and Williamson find that polarization would be even worse were challengers more successful. Candidates who are extreme, relative to their opponents and relative to their districts, are likely to lose elections. Amateurs without political experience tend to be particularly extreme and particularly likely to lose.

The effect of polarization on policy formation is addressed in the paper by Sanford Gordon and Dimitri Landa. Their central argument is that policy change depends on the distribution of status quos and the shapes of utility functions and not just polarization as captured by the distribution of ideal points. The analysis relies on the Gaussian utility model that underpins NOMINATE. Gordon and Landa's paper thus differs from several papers in this volume that use an item response theory (IRT) model for scaling. IRT's main distinction from NOMINATE is the assumption that spatial utility is quadratic in the distance of the ideal point from an alternative, whereas NOMINATE assumes a Gaussian distribution. An *American Journal of Political Science* paper by Carroll et al. (2013) shows that the empirical evidence, at least for Congress, argues emphatically for Gaussian utility. Although the distinction may not make an important difference in the estimation of chooser ideal points, the 2013 paper argues that the shape of the utility function may be important for studying strategic behavior in the legislature. For the 111th Senate (2009–2010), Gordon and Landa

echo the 2013 *AJPS* paper and find that the Gaussian model is preferred. They then explore the contentiousness of recent legislation, including the 2010 stimulus package, the Affordable Care Act, and the Dodd–Frank Act.

Four papers in this volume deal with ideology in Europe.

NOMINATE was used to estimate a two-dimensional spatial model of the European Parliament (EP) by Hix et al. (2006). Noury, Roland and Hix return to the EP in this volume. Many scholars have been concerned about whether measurements of ideology are affected by a selection process that determines what issues or bills are the subject of recorded votes. The authors use a natural experiment to address that question. In 2009, the European Parliament made roll calls mandatory for all final legislative votes. Their analysis suggests that the 2009 requirement was not important to measurement.

James Lo also focuses on voting in the EP. His article provides a dynamic analysis that ties together votes from 1979 to 2009. The dynamic model is the random walk IRT model of Martin and Quinn (2002). The standard Bayesian approach to estimation is too computationally intensive to be applied to the very large dataset for the EP. Lo consequently uses a new Expectation Maximization method he recently developed with Imai et al. (2016). A limitation is that the estimation is one-dimensional. The results of the estimation are used to study the ideological stability of individual members of the EP, party discipline, and the dynamics of party cohesion. Lo compares his results to those from the static estimations of Hix, Noury and Roland.

In contrast to the two just-discussed works on the European Parliament, Royce Carroll and Hiroki Kubo are concerned with voters' and experts' perceived ideologies of European political parties at the national level. They measure ideology in two ways. First, by an Aldrich–McKelvey scaling of voter self-placements and party placements on a left–right scale. Second, by a Poole Blackbox scaling of voter self-placements on issue scales and expert placements of political parties on the same scales. The data are drawn from the Chapel Hill Elite Survey and the European Election Study.

Carroll and Kubo investigate how the two types of measurements affect conclusions about how party polarization and education relate to the distances between the positions of the parties and the positions of their electorates. Distance is taken as a measure of party–supporter congruence. Polarization and the interaction with education affect ideological congruence differently when ideology is measured by issue scales than by left–right placements. The paper thus sounds a note of caution. The appropriate measurement of ideology is an open question.

The contribution of Ryan Bakker, Seth K. Jolly and Jonathan Polk draws on the two data sources used by Carroll and Kubo. They use only three of the 10-point questions, left–right, European integration, and immigration. They do not scale these items but compute directly Euclidean distances between survey respondents' positions and expert positions. The authors then use those distances to study vote switching between the most recent national elections and the European Parliament election of 2014. They find that widening distance, i.e., lack of congruence, leads to more vote switching, with switching conditioned on issue salience.

The three papers by Haas–Morton, Carroll–Kubo, and Bakker–Jolly–Polk raise concerns about how mass public evaluations of issues can be used to predict behavior. Can we rely on cheap talk expressions of preference? Should raw measures be used, or should scaling be used? Which scaling model is appropriate? A horse race is in order to resolve these issues.

All of the papers discussed to this point have dealt with *choice* between alternatives. Keith Poole, in addition to his most noted work on choice, also contributed to the study of electoral participation. A paper by Palfrey and Poole (1987) studied the effect of voter information

on turnout. A chapter of *Ideology and Congress* studied participation in eighteenth and nineteenth century Congresses, times when absences were common. *Polarized America* examined the total lack of turnout by non-citizens and the low turnouts of low income citizens; linkages were made to how turnout impacted income inequality and political participation.

Antonio Merlo and Thomas R. Palfrey explore possible motivations for electoral participation. They evaluate alternative models by applying a parameter recovery methodology. The data they used came from a setup with costly participation. The numbers of voters on the majority side and the minority side are common knowledge. Each voter has a cost of voting that is private information, but all voters know the distribution of costs. Subjects can either vote or abstain. The distribution is specified by the maximum possible cost. They ask whether that cost can be recovered by a quantal response equilibrium model incorporating idiosyncratic taste shocks. They consider models of instrumental, altruistic, expressive and ethical vote choices. Only the ethical model's recovery strays far from the true cost distribution.

The last paper in this volume, by Robert Grafstein, channels an empirical observation made by Poole. In the paper with Carroll et al. (2013), Poole found that extremists had sharper, i.e., more intense, utility functions than moderates. Grafstein endogenizes extremism in a model of income redistribution. What he characterizes as extremism takes the form of tougher bargaining positions of the most poor and most rich in response to income shocks. He tests the model with panel data from the Political Action Study in Germany, the Netherlands, and the United Kingdom.

I expect that readers will be informed by these papers and will find them witness to the influence, depth and breadth of Keith Poole's scholarship.

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