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Introduction to the Special Issue

Gary Cox
University of California, San Diego

THE SPATIAL MODEL is the workhorse theory of modern legislative studies. Starting as a metaphor common in discussions of mass elections, the model's basics were developed by Hotelling (1929) and Downs (1957) for use in the electoral arena and by Black (1948a,b) for use in legislative studies.

In both its electoral and its legislative versions, the spatial model was originally purely deterministic. Voters were presumed to be faced by w issues, each issue represented by a dimension in a policy space, W (a subset of Euclidian w-space). Voters' preferences were represented by utility functions defined over W, with each voter possessing a unique ideal or most-preferred point. When presented with a choice between rejecting a bill, and thereby retaining the status quo $s \in W$, or passing that bill, and thereby instating a new policy $b \in W$, a voter voted "aye" (for passage) if she preferred b to s, voting "nay" (against passage) if she preferred s to b.

It took some time before the somewhat parallel literature on scaling legislators' roll call votes—which assumed probabilistic voting and focused on the empirical task of recovering legislators' scale positions—merged with the spatial model. It did so most clearly in the work of Poole and Rosenthal (1985, 1997), whose NOMINATE algorithm was based explicitly on a spatial justification.

Taking Poole and Rosenthal, and Heckman and Snyder (1997), as the first generation of such efforts, this special issue presents five papers from what might be called the "second generation" of stochastic spatial modeling. The papers in this burgeoning literature can be viewed as chasing two related goals: a closer integration of the theoretical models with their estimation partners, yielding better estimators of key theoretical parameters.

The Papers on Offer Here

The second-generation papers on offer here cover a wide range of topics, from the utility of plain and simple measures of ideal points, to the construction of fancier measures when the data are poor, to estimation issues in data-richer cases.

The paper by **Michael Herron** (2001) shows that interest group ratings, first in the field and still widely used as indicators of member ideology, are difficult to defend. Even assuming a particularly "nice" set of circumstances, interest group ratings can have a wide variety of problems, especially when used as independent variables in other analyses. This is particularly disturbing given the prevalence of such use in the literature. The primary message is that empirical investigators should stop using interest group ratings and look for better estimates of ideal points, or at least beware of the pitfalls when they do use them.

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Two other papers investigate how to do this—how to fashion better estimators—when the data are poor. **Michael Bailey** (2001) tackles the problem of estimating ideal points when there are too few votes for standard techniques. He shows how the clever use of covariates in a random effects model can solve the problem. **Jeffrey Lewis** notes that, if we wish only to estimate the parameters of distributions of ideal points in exogenously stipulated groups, then we can venture into data-ground that is even stonier. This work should be particularly useful for those who have clear ideas about the relevant groups in politics and wish to provide better descriptions of the nature of the ideological cleavages between them.

The last three papers assume better data and seek conceptual or methodological advances. They bear on what I view as three of the main challenges ahead for stochastic spatial theory. The first challenge is this: ideal points reflect members' operational preferences, which in turn are conventionally theorized as a confection of four factors: personal belief, constituents' pressures, party influence, and side payments from interest groups. How can we estimate the separate contributions of these four factors? The second challenge is this: ideal points are a function of the agenda, which is formed strategically. How can we account for this in our estimators? The third challenge is to explore and theorize better the parameters of the model that tap into the features of each roll call (e.g., the cutpoint).

Keith Poole's piece bears on the first of these issues. Its primary purpose is to expose the geometry of quadratic utility models. It turns out that this is closely related to Poole's (2000) work on optimal classification, which in turn contributes to a solution of the problem of detecting party influence on roll call votes (Cox and Poole 2001).

Joshua Clinton and **Adam Meirowitz's** (2001) piece bears on the second issue, in particular, by challenging previous models' handling of the status quo. Their point is simply that, if a bill is enacted, then the status quo changes. Thus, our estimation models should impose a constraint—that the status quo equals the last enacted policy—that current techniques do not. I would quibble with how they implement their model: as it stands, they assume that every successful vote changes the status quo; but the only votes that do change the status quo are final passage votes (and, then, only if we are willing to assume that all bills that pass the House are enacted). I would also point out that city-block preferences might work better with our standard models (NOMINATE and Heckman–Snyder) and that this metric is not greatly less defensible than are Euclidian preferences. But the basic point that Clinton and Meirowitz make is well taken and it opens up a variety of interesting questions.

Simon Jackman's piece bears on the third issue, that of exploring the roll call-specific parameters of the model. He illustrates the use of Bayesian priors in identifying the substantive meaning of the sometimes-mysterious dimensions that float about in spatial models of legislative voting. The notion is that roll call analysis may sometimes be something closer to confirmatory factor analysis, in which the researcher brings and formally includes in the analysis preconceptions (in the good, Bayesian sense) about the cleavage structures at hand.

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