

Formal Models of Domestic Politics

Second Edition

Formal Models of Domestic Politics offers a unified and accessible approach to canonical and important new models of politics. Intended for political science and economics students who have already taken a course in game theory, this new edition retains the widely appreciated pedagogic approach of the first edition. Coverage has been expanded to include a new chapter on nondemocracy; new material on valence and issue ownership, dynamic veto and legislative bargaining, delegation to leaders by imperfectly informed politicians, and voter competence; and numerous additional exercises. Political economists, comparativists, and Americanists will all find models in the text central to their research interests.

This leading graduate textbook assumes no mathematical knowledge beyond basic calculus, with an emphasis placed on clarity of presentation. Political scientists will appreciate the simplification of economic environments to focus on the political logic of models; economists will discover many important models published outside of their discipline; and both instructors and students will value the classroom-tested exercises. This is a vital update to a classic text.

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Some of the material in Chapter 8 first appeared in the review article “Formal Models of Nondemocratic Politics” (Gehlbach, Sonin, and Svolik, 2016). With modification, it reappears with permission from the *Annual Review of Political Science*, Volume 19 © 2016 by Annual Reviews, www.annualreviews.org.

This book is dedicated to Adrian, who was born as I was finishing the first edition and who was at my side in *confinement* Paris as I was writing much of the second. Cucumber baguette sandwiches, Zoom classes, tag in front of the *mairie*—these are my memories of writing this book.

Preface

In 2013, I published the first edition of *Formal Models of Domestic Politics*. As Scott Ashworth stated in his endorsement of the book, the goal of the text was to “guide students over the terrain that separates a standard game theory course from the research frontier in applied formal theory.” With that aim in mind, I wrote a book that covered many (inevitably, not all) of the most important models of domestic politics in political science and economics, with an emphasis on rigor over advanced mathematics and a focus on the political logic of models, whatever their disciplinary origin. I have been gratified to see the text widely adopted in graduate courses in political science and economics, and pleased to see it emerge as a standard reference for students and faculty alike.

At their best, textbooks represent a snapshot of the field at the time of publication. But fields evolve, and textbooks must change if they are to remain relevant. I added the last material to *Formal Models of Domestic Politics* in early 2012, just before the book went to press. Since then, there has been important new work—in many cases, by new scholars—that demands treatment in a format accessible to graduate students and others literate in game theory but without the background or time to absorb the original research papers.

In short, *Formal Models of Domestic Politics* needed an update. The second edition extends the book in various directions. Most notably, the new text includes a chapter on models of nondemocracy. When I wrote the first edition, my judgment was that the formal study of authoritarian politics was too fresh for a synthetic treatment. That is no longer the case.

Other new material fits naturally into the existing structure of *Formal Models of Domestic Politics*. The revised text includes new sections on valence and issue ownership in electoral competition, dynamic veto bargaining, delegation to leaders (as an application of cheap talk with multiple senders),

dynamic legislative bargaining, and voter competence. I have also substantially revised the discussion of collective action under certainty and uncertainty; the same chapter includes an updated discussion of equilibrium in Acemoglu and Robinson's model of political transitions. Elsewhere, I have tinkered with language in an endless pursuit of clarity. Not least, I have incorporated many new models as exercises.

Taking stock, I repeat my apology from the first edition: the field is vast, and numerous models are missing. Those included in *Formal Models of Domestic Politics* are a subset of 1) those I know, which 2) I believe represent important theories or modeling approaches and 3) I can write on a blackboard (often with some simplification), while 4) fitting into the narrative flow of the text. Of the four constraints, the first is perhaps the most important. I try to read widely, in both political science and economics, but I undoubtedly miss a great deal. As for the second, there is no accounting for taste. I anticipate that instructors will supplement the text with other work that they want their students to learn.

In preparing the second edition of *Formal Models of Domestic Politics*, I was guided by the same pedagogy that animated the first:

- **Consider the mathematical background of the students.** I teach the material in *Formal Models of Domestic Politics*. At Wisconsin, the course on which the text is based was primarily intended for political scientists, though there were always economists in the classroom—a pattern I now see repeated at Chicago, though with more balance between the two disciplines. In pitching the material to both groups of students, I have found it best to emphasize rigor over advanced mathematics. Where I do use math that may be unfamiliar (e.g., dynamic programming or the envelope theorem), I introduce the necessary tools in the context of particular models.
- **Don't skip steps.** One of the most common questions for graduate students in formal theory is “Where did that come from?” In writing the book, I have tried to anticipate this question, providing enough detail that readers can reproduce results on their own. Teaching the material in the classroom is critical in this regard, as it provides me an opportunity to discover what is unclear.
- **Present multiple versions of the same model.** I typically begin with the simplest possible model and then present progressively more general variants. In some cases, this means analyzing the two-period version of a model before moving to an infinite-horizon setting. In others, it means proceeding from less to more general policy spaces. Readers of

Formal Models of Domestic Politics therefore have multiple exposures to the same class of models, and they learn the mechanics of a model before considering its broader implications.

- **Use simple policy spaces.** Many of the core models in formal political theory were developed to address questions of importance to economists. As a consequence, graduate students in political science often find that they do not know enough economics to understand the politics behind a model. In *Formal Models of Domestic Politics*, I generally assume simpler policy spaces. When I do embed the model in an economy, I do so only after first presenting the mechanics in a simpler setting.

The result is a text that should be challenging but accessible to graduate students who have a working familiarity with differential and integral calculus and a semester or so of game theory under their belts. For those designing a course sequence in political science, a useful model is to offer game theory first (I have used Osborne, 2004; the text assumes a commensurate background) and a course based on *Formal Models of Domestic Politics* second, with calculus either integrated into the first-year curriculum or contracted out to the math department. In economics, a course in political economy that used *Formal Models of Domestic Politics* would be a natural offering for second-year students. In either case, as discussed above, I anticipate that instructors will wish to supplement the text with articles that the book does not cover, even as they choose selectively from those that it does.

With the new material, *Formal Models of Domestic Politics* includes roughly twice what could be covered in a normal semester. Some topics are harder than others; the second half of the book is on average more demanding than the first. I have italicized the titles of sections that in my view are particularly challenging. Regardless of the topic, the exercises are an integral part of the presentation. A complete solutions manual is available upon request.

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