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Nolan McCarty and Adam Meirowitz
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POLITICAL GAME THEORY

Political Game Theory is a self-contained introduction to game theory and its applications to political science. The book presents choice theory, social choice theory, static and dynamic games of complete information, static and dynamic games of incomplete information, repeated games, bargaining theory, mechanism design, and a mathematical appendix covering logic, real analysis, calculus, and probability theory. The methods employed have many applications in various subdisciplines including comparative politics, international relations, and American politics. *Political Game Theory* is tailored to students without extensive backgrounds in mathematics and traditional economics; however, many special sections present technical material appropriate for more advanced students. A large number of exercises are also provided for practice with the skills and techniques discussed.

Nolan McCarty is Associate Dean and Professor of Politics and Public Affairs at the Woodrow Wilson School at Princeton University. His recent publications include *Polarized America: The Dance of Ideology and Unequal Riches* (2006, with Keith Poole and Howard Rosenthal) and *The Realignment of National Politics and the Income Distribution* (1997, with Keith Poole and Howard Rosenthal), as well as many articles in periodicals such as the *American Political Science Review* and the *American Journal of Political Science*.

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Political Game Theory

AN INTRODUCTION

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To Moms and Dads, Liz, Janis, Lachlan, and Delaney

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Acknowledgments

The origin of this book is the utter inability of either of its authors to write legibly on a blackboard (or any other surface, for that matter). To save our students from what would have been the most severe form of pedagogical torture, we were forced to commit our lecture notes to an electronic format. Use of this medium also compensated for our inability to spell without the aid of a spell checker.[1] Ultimately we decided that all of the late nights spent typesetting game theory notes should not go in vain. So we undertook to turn them into this book, which, of course, led to more late nights spent typing. We hope these weren't wasted either.

We are most grateful to our students at Columbia and Princeton, on whom we inflicted early versions of our notes and manuscript. Puzzled looks and panicked office hours helped us learn how to convey game theory to students of politics. We also benefited from early conversations with Chris Achen, Scott Ashworth, Larry Bartels, Cathy Hafer, Keith Krehbiel, David Lewis, Kris Ramsay, and Thomas Romer on what a book on political game theory ought to look like. Along the way Stuart Jordan and Natasha Zharinova have provided valuable assistance and feedback. We especially thank John Londregan and Mark Fey for noting mistakes in earlier drafts. Finally, our greatest debts are to those who taught us political game theory:

[1] Our misspelling styles are quite distinctive, however. For a given word, McCarty uses completely random spellings whereas Meirowitz consistently misspells the word in exactly the same way.

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