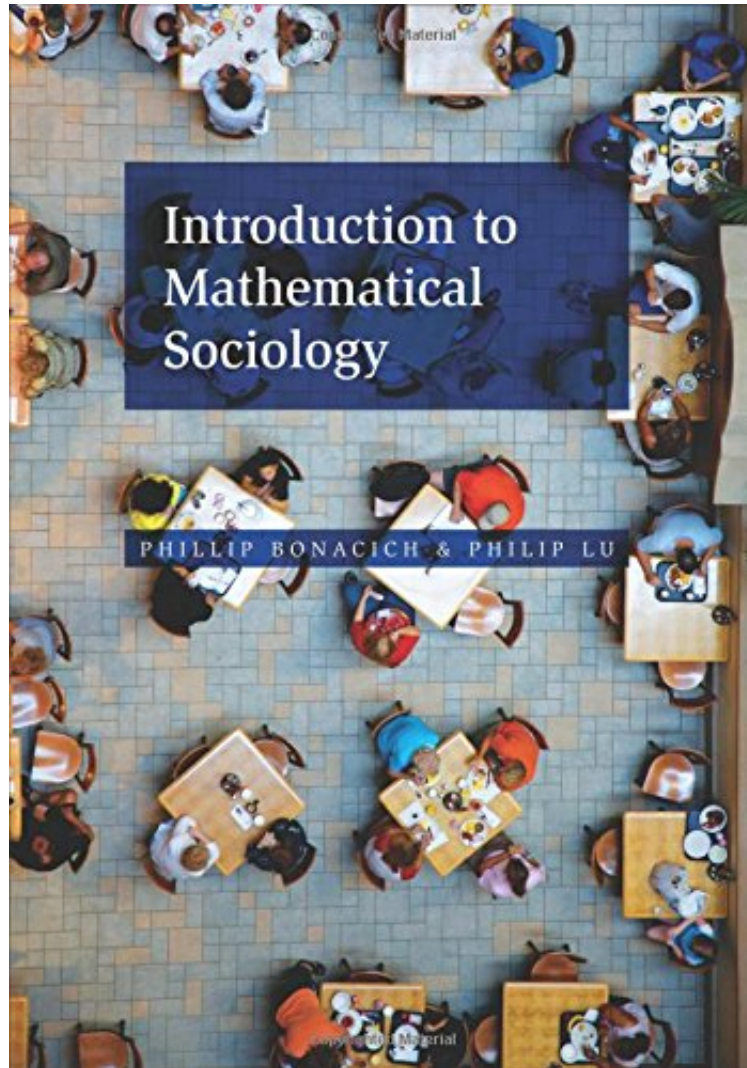


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Introduction to Mathematical Sociology

Phillip Bonacich, Philip Lu

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Phillip Bonacich, Philip Lu : Introduction to Mathematical Sociology before purchasing it in order to gage whether or not it would be worth my time, and all praised Introduction to Mathematical Sociology:

7 of 11 people found the following review helpful. Not Really About Sociology, or Even Very MathematicalBy Dennis HansemanHere is my guess regarding the genesis of this book. The senior author had an incomplete set of class notes and the junior volunteered to "turn them into a book". Of course, I cannot be sure about this, but the results suggest that I am correct. The result is a mishmash of topics, styles, and depth of coverage that will not provide much help to the neophyte. Some chapters (e.g., Chapters 2 and 4) are mostly mathematical formalism without much depth. Others (e.g., Chapter 6) contain some sociology and little math. And yet others are shot through with typos and other

errors. The biggest flaw in this book -- in my opinion, anyway -- is the ridiculous choice of examples in some chapters. The central examples in Chapter 3 on probability concern dice and playing cards. Chapter 14 (Markov Chains) centers on drawing balls from an urn. The demography chapter (15) employs an example of the life cycle of a cat. Where is the sociology? The book concludes with an "Afterword: 'Resistance is Futile'" that tries to make the case that the mathematical is a necessary component of education in sociology. That may be the case, but my advice is: "Resist this book!". 3 of 3 people found the following review helpful. A book for newcomer, not veterans. By Daniel Lee

Mathematical Sociology is a hard subject to bring together into a cohesive textbook. Looking at the major journals in the field, the article submissions are often not from sociologists, but computer scientists, mathematicians, and even physicists. In the same way, this book really doesn't have much sociology in it -- only potential sociological applications. With that said, it does a good job of bringing together a lot of mathematical topics that the typical student in sociology will not be exposed to if they take the basic quantitative regimen of statistics and survey data analysis. It has a lot of overlap with social networks. Some of the chapters are nearly identical to the subject matter in an undergraduate social networks course. The later chapters on game theory also offer content that is not available anywhere else. In short, this book isn't for seasoned veterans of the field, but written for new and curious minds. Though the writing style may vary, some chapters are very friendly and explain concepts in a very accessible manner, sometimes even with humor. As an introductory book, it could have used more references, or at least point the inspired reader to additional resources if they wanted to explore each of the different topics in the book further.

Mathematical models and computer simulations of complex social systems have become everyday tools in sociology. Yet until now, students had no up-to-date textbook from which to learn these techniques. Introduction to Mathematical Sociology fills this gap, providing undergraduates with a comprehensive, self-contained primer on the mathematical tools and applications that sociologists use to understand social behavior. Phillip Bonacich and Philip Lu cover all the essential mathematics, including linear algebra, graph theory, set theory, game theory, and probability. They show how to apply these mathematical tools to demography; patterns of power, influence, and friendship in social networks; Markov chains; the evolution and stability of cooperation in human groups; chaotic and complex systems; and more. Introduction to Mathematical Sociology also features numerous exercises throughout, and is accompanied by easy-to-use Mathematica-based computer simulations that students can use to examine the effects of changing parameters on model behavior. Provides an up-to-date and self-contained introduction to mathematical sociology Explains essential mathematical tools and their applications Includes numerous exercises throughout Features easy-to-use computer simulations to help students master concepts

"[T]he volume offers certain important building blocks that can represent a bonus for students willing to learn simulation in the future. . . . Bonacich and Lu's work brilliantly introduces much of what ABM students will be requested to know in their subsequent studies."--Giangiacomo Bravo, JASSS

"If you are interested in sociology specifically, or in some of the others social sciences (especially political science), then this book is a very good introduction for you. . . . I would certainly recommend it to students and others who have some mathematical maturity and are interested in mathematical sociology, mathematical political science, or mathematical psychology."--James M. Cargal, UMAP Journal

From the Back Cover "A first-rate introduction. The coverage is exemplary, starting with basic math techniques and progressing to models that incorporate a number of these techniques. Chapters on evolutionary game theory, cooperative games, and chaos are significantly innovative, as is the incorporation of simulations. This book brings mathematics to life for students who may entertain doubts about the role of math in sociology."--Peter Abell, professor emeritus, London School of Economics and Political Science

"This book provides a concise and up-to-date introduction to mathematical sociology and social network analysis. It presents a solid platform for engaging undergraduates in mathematical approaches to sociological inquiry, and includes Mathematica modules with which students can explore the properties and implications of a variety of formal models. I plan on using it in my courses on social networks."--Noah E. Friedkin, coauthor of Social Influence Network Theory: A Sociological Examination of Small Group Dynamics

About the Author Phillip Bonacich is professor emeritus of sociology at the University of California, Los Angeles. Philip Lu is a PhD candidate in sociology at UCLA.