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| Descrizione fisica      | 1 online resource (268 p.)   |
| Collana                 | Princeton Studies in Complexity ; ; 25<br>Princeton studies in complexity  |
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| Livello bibliografico   | Monografia   |
| Note generali           | Description based upon print version of record.  |
| Nota di bibliografia    | Includes bibliographical references and index.   |
| Nota di contenuto       | Frontmatter -- Contents -- Foreword -- Preface -- Acknowledgments -- Introduction -- Part I. Mathematical Model -- Part II. Agent-Based Computational Model -- Part III. Extensions -- Part IV. Future Research and Conclusion -- Appendix I. Threshold Imputation Bounds -- Appendix II. Mathematica Code -- Appendix III. Agent_Zero NetLogo Source Code -- Appendix IV. Parameter Settings for Model Runs -- References -- Index  |
| Sommario/riassunto      | The Final Volume of the Groundbreaking Trilogy on Agent-Based Modeling<br>In this pioneering synthesis, Joshua Epstein introduces a new theoretical entity: Agent_Zero. This software individual, or "agent," is endowed with distinct emotional/affective, cognitive/deliberative, and social modules. Grounded in contemporary neuroscience, these internal components interact to generate observed, often far-from-rational, individual behavior. When multiple agents of this new type move and interact spatially, they collectively generate an astonishing range of dynamics spanning the fields of social conflict, psychology, public health, law, network science, and economics. Epstein weaves a computational tapestry with threads from Plato, Hume, Darwin, Pavlov, Smith, Tolstoy, Marx, James, and Dostoevsky, among others. This transformative synthesis of social philosophy, cognitive neuroscience, |

and agent-based modeling will fascinate scholars and students of every stripe. Epstein's computer programs are provided in the book or on its Princeton University Press website, along with movies of his "computational parables." Agent\_Zero is a signal departure in what it includes (e.g., a new synthesis of neurally grounded internal modules), what it eschews (e.g., standard behavioral imitation), the phenomena it generates (from genocide to financial panic), and the modeling arsenal it offers the scientific community. For generative social science, Agent\_Zero presents a groundbreaking vision and the tools to realize it.

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