

Contents

| | |
|---|-----|
| 1 Introduction to the Mathematical Modeling of Social Relationships | 1 |
| Urszula Strawinska-Zanko and Larry S. Liebovitch | |
| 2 Dynamic Models of Social Interaction | 17 |
| John M. Gottman and Paul R. Peluso | |
| 3 Quantitative Video Coding of Therapist-Client Sessions | 31 |
| Paul R. Peluso, Patricia Diaz, and Gabriella Tabib | |
| 4 Dynamical Analysis of Therapist-Client Interactions | 51 |
| Paul R. Peluso, Andrew Z. Baker, Ashley Sauer, and Jennifer P. Peluso | |
| 5 Modeling Psychotherapy Encounters: Rupture and Repair | 69 |
| Urszula Strawinska-Zanko, Larry S. Liebovitch, and Paul R. Peluso | |
| 6 Mathematical Models as Tools for Understanding the Dynamics of Cooperation and Conflict | 89 |
| Jay L. Michaels | |
| 7 A Dynamical Approach to Conflict Management in Teams | 119 |
| (Rae) Yunzi Tan, Jay L. Michaels, and Urszula Strawinska-Zanko | |
| 8 Modeling the Dynamics of Sustainable Peace | 147 |
| Larry S. Liebovitch, Peter T. Coleman, David Futran, Devin Lee, Tamar Lichter, Nicholas Burgess, Daniel Maksumov, and Celine C. Ripla | |
| 9 Capital in the First Century: The Evolution of Inequality in Ancient Maya Society | 161 |
| Urszula Strawinska-Zanko, Larry S. Liebovitch, April Watson, and Clifford T. Brown | |

| | | |
|-----------|---|-----|
| 10 | Can the Nash Equilibrium Predict the Outcomes of Military Battles? | 193 |
| | Celine C. Ripla and Larry S. Liebovitch | |
| 11 | Future Directions in the Mathematical Modeling of Social Relationships | 213 |
| | Larry S. Liebovitch and Urszula Strawinska-Zanko | |
| | Index | 219 |

| | | |
|-----|---|-----|
| 1 | Introduction to the Mathematical Modeling of Social Relationships | 1 |
| | Urszula Strawinska-Zanko and Larry S. Liebovitch | |
| 17 | Dynamic Models of Social Interaction | 17 |
| | John M. Gottman and Paul R. Peltuso | |
| 31 | Quantitative Video Coding of Therapist-Client Sessions | 31 |
| | Paul R. Peltuso, Patricia Diaz, and Gabriella Talib | |
| 51 | Dynamical Analysis of Therapist-Client Interactions | 51 |
| | Paul R. Peltuso, Andrew Z. Baker, Ashley Sauer, and Jennifer P. Peltuso | |
| 69 | Modeling Psychotherapy Encounters: Rupture and Repair | 69 |
| | Urszula Strawinska-Zanko, Larry S. Liebovitch, and Paul R. Peltuso | |
| 89 | Mathematical Models as Tools for Understanding the Dynamics of Cooperation and Conflict | 89 |
| | Jay I. Michaels | |
| 119 | A Dynamical Approach to Conflict Management in Teams | 119 |
| | (Rao) Yuntz Jan, Jay I. Michaels, and Urszula Strawinska-Zanko | |
| 147 | Modeling the Dynamics of Sustainable Peace | 147 |
| | Larry S. Liebovitch, Peter T. Coleman, David Futran, Devin Lee, Tamar Lichter, Nicholas Burgess, Daniel Maksimov, and Celine C. Ripla | |
| 161 | Capital in the First Century: The Evolution of Inequality in Ancient Maya Society | 161 |
| | Urszula Strawinska-Zanko, Larry S. Liebovitch, April Watson, and Clifford T. Brown | |