## Contents

_Acknowledgments_ page xiii

**Introduction** 1  
- The Terms of the Debate 2  
- Theory 6  
  - Spontaneous Cooperation 8  
  - Growth, Inequality, and the State 9  
  - Types of State Institutions 10  
  - Inequality under the State 12  
  - The Problem of Development 12  
- Empirical Method and the Use of Historical Material 15  
- Plan of the Book 18

1. Tabula Rasa 22  
- Initial Conditions 23  
- Spontaneous Cooperation under a Condition of Equality 26  
  - The Shadow of the Future 28  
  - The Technology of Predation 29  
  - The Exit Option 30  
- Dynamics of Population Growth and Migration in a Stateless World 30  
- The Nature of Cooperation 31  
- Equality in Risk Sharing 32  
- Production Complementarities and Equality 33  
- A Nested Model of Cooperation 34  
- Empirical Evidence on Stateless Societies 35  
- Equality of Material Conditions 37  
- Political Life 44
Table of Contents

2. Political Order
   - Learning-by-Doing, Inequality, and Sorting
   - From Conflict to Political Order
   - Monarchical Solution
   - The Republican Compact
   - Producers Doubling as Exploiters: Patronage Systems and Imperial Republics
   - Mixed Regimes
   - Monarchies or Republics? The Role of Warfare
   - Extraction Rate
   - Relative Military Capacity
   - Opportunity Costs
   - Warfare and the Number and Territorial Size of Political Regimes
   - Economic Inequality
   - Growth
   - The State as an Optimal Solution to Anarchy

3. Technological Progress
   - Technological Change and the Territorial Clustering of Production
   - Technological Innovation and Institutional Change among Maritime Foragers
   - Cross-Sectional Evidence
   - Biogeography and the Introduction of Agriculture
   - The Formation of Political Authority
   - Violence and Population Migrations
   - A Discussion of Alternative Explanations

4. Warfare
   - The Metal Revolution
   - Copper and Bronze
   - The Introduction of Iron
   - The Horse
   - Introduction of the Horse
   - Military Effects of the Horse
   - The Horse and the War Chariot
   - Stirrup and Heavy Cavalry

Equality and Social Conformity 46
The Effects of Equality and Social Conformity 51
Stability and Violence 51
Stagnation and Discontinuous Growth 54
Appendix. Equality and Cooperation: A Numerical Example 55

Monarchies or Republics? The Role of Warfare 76
Extraction Rate 77
Relative Military Capacity 77
Opportunity Costs 78
Warfare and the Number and Territorial Size of Political Regimes 79
Economic Inequality 83
Growth 87
The State as an Optimal Solution to Anarchy 89

Technological Change and the Territorial Clustering of Production 94
Technological Innovation and Institutional Change among Maritime Foragers 96
Cross-Sectional Evidence 101
Biogeography and the Introduction of Agriculture 110
The Formation of Political Authority 116
Violence and Population Migrations 124
A Discussion of Alternative Explanations 124

The Metal Revolution 131
Copper and Bronze 131
The Introduction of Iron 134
The Horse 140
Introduction of the Horse 140
Military Effects of the Horse 143
The Horse and the War Chariot 147
Stirrup and Heavy Cavalry 148
# Contents

Geographical Limits to the Military Effectiveness of Heavy Cavalry 155

Medieval Urban Growth and a Downward Shift in the Military Effectiveness of Heavy Cavalry 157

Gunpowder and Firearms 159

Monarchical and Aristocratic Elites versus Cities 160

Nobles versus Peasants 166

Beyond Europe 169

5. Inequality 171

Height Dispersion and Income Inequality 174

Income, Nutrition, and Height 174

Evidence 177

The Evolution of Height 178

The Boas Data Set: Nineteenth-Century Native Americans 180

The Impact of War Making in Agrarian Societies 185

The Zuni Pueblo 186

Mayan Cities 186

Mycenae and Egypt 188

Medieval and Modern Europe 191

Japan 195

The Impact of Factor Endowment and Production Regimes on Height 197

Midwest Farming Economies 197

Slave Economies 199

Conclusions 199

6. Modern Breakthrough 202

The Terms of the Debate 205

Endogenous Growth 209

Biogeographical Foundations of Population Growth 209

The Formation of Urban Clusters 213

Proto-industrialization in Europe 214

Urban Growth and Nineteenth-Century Income 216

The West and the Rest 218

The Role of Parliamentarism 219

Political Fragmentation and War Technologies in Western Europe 222

The Embourgeoisement of Old Elites 230

Declining Inequalities 232

Political Inequality 232

Economic Inequalities 235
## Contents

7. Conclusions 243  
Classical Political Theorists 244  
Anarchy and Cooperation 248  
Political Institutions 251  
Growth and Inequality after the First Transition 258  
Transition to a Modern World 261  
Inequality Today 264  

References 269  
Name Index 295  
Subject Index 307