## **Table of Contents**

Foreword
----------

Chapter 1 – Preliminary considerations	1
1.1. Types of choice	1
1.2. A decision and its components	4
1.3. Aligning things on a scale	7
1.4. Take consequences at face value	10
1.5. Decisions in a game-theoretic setting	13
1.6. How to design a game	15
Chapter 2 – How games are dealt with	19
2.1. Games in tree or matrix form	19
<b>2.2.</b> Dynamic choice: games as trees	21
2.3. Static choice: games as matrices	23
2.4. Reasoning on trees	26
2.5. Reasoning on matrices	28
<b>2.6.</b> The rationale of rational choice	31
Chapter 3 – On games in normal form	33
3.1. Solving the (matrix) riddle	33
3.2. Equilibria	36
3.3. Getting rid of the loop on rationality of actions	48
3.4. Hypotheses and their revision	54
3.5. Equilibria as fixpoints of the revision operator	61
3.6. Unique equilibria?	72
3.7. The limits of strict games and strict equilibria	75

VII

3.8. When strictness fails	80
3.9. What if the opponent trembles?	84
3.10. Proper equilibria	99
3.11. Generalizing the analysis to all finite games	105
3.12. Bibliographical note	107

Chapter 4 – Sequential play: games in extensive form	111
4.1. One player after the other	112
4.2. Solving trees, backwards	114
4.3. An abstract, mathematical approach	119
4.4. Preliminary notions and basic notation	119
4.5. Two-person, zero-sum, perfect information games	124
4.6. The model of finite games	124
4.7. Alternative models of finite games	127
4.8. Determinacy of finite games	142
4.9. GRH at work	157
4.10. Bibliographical note	159

## Bibliography

163