
Contents

Foreword	vii
Introduction	xiii
Chapter 1. The Birth of an Electrical Culture: From Frankenstein to Hyde	1
1.1. “Re”creating life?	2
1.2. Changing and regulating behavior	31
1.3. Possible electrical profiling?	45
Chapter 2. From Physics to Electrifying Physicists	49
2.1. Physics, knowledge of laws and nature of electricity	50
2.2. Medical physics: philosophical issues	65
2.3. Healing machines?	80
Chapter 3. Controversial Electricity Applications	91
3.1. Paralysis.	92
3.2. Nervous disorders	100
3.3. Electricity: between the normal and the pathological	115
Chapter 4. Animal Electricity: Between Medicine and Physiology	125
4.1. Understanding life: heuristic experiments	125
4.2. Medical galvanism	143
4.3. Electrocentric life	154

Chapter 5. Between Electrotherapy Rooms and Laboratories: Specializing Electricity	169
5.1. Electrical therapies: emergencies and interventionism	170
5.1.1. Deceptive diseases	171
5.1.2. When treatment depends on techniques	180
5.1.3. Electricity: a diagnostic tool for mental illness?	197
5.2. Exploration and recording of nervous system activities	203
5.2.1. Electrophysiology: measuring and exploring from 1848 onwards	203
5.2.2. Stimulations on animal and human brains: localist perspectives	213
5.2.3. Brain electricity recordings and the electric alphabet	228
Chapter 6. Disorders and Resurgences of Electrical Neurostimulation Therapies: From Heath to Deep Brain Stimulation	239
6.1. Stimulation, control and improvement of moral and cognitive capacities	241
6.2. Deep brain stimulation and psychiatry	251
6.3. Man, brain and machine	265
Conclusion	271
Appendix 1	275
Appendix 2	281
References	289
Index of Names	325
Index of Terms	331