

Radical Treatment

Wilder Penfield's Life in Neuroscience

RICHARD LEBLANC

McGill-Queen's University Press

Montreal & Kingston • London • Chicago

Contents

Acknowledgments / ix

Introduction / 3

A Note on Anatomy / 7

1 1954 – Outside Looking In / 15

PART ONE

The Royal Victoria Hospital, 1928–34

2 The Making of a Neurosurgeon / 27

3 Brain Scars / 39

4 Conjectures and Refutations / 54

5 A Bird in an Aviary / 78

6 Brain Tumours / 95

PART TWO

The Montreal Neurological Institute, 1934–76

ONE The Structure–Function Relationship of the Brain

7 The Homunculus / 113

8 The Supplementary Motor Area / 128

9 Speech and Brain Mechanisms / 139

TWO The Surgical Treatment of Temporal Lobe Epilepsy

10 The Importance of Scars / 163

11 The Dreamy State / 176

12 Incisural Sclerosis / 189

THREE The Ghost in the Machine

13 The Labyrinth of Memory / 200

14 The Physiology of Mind / 217

Postscript: 2010 – Looking Back / 239

Appendix: Results of Surgery / 241

Notes / 245

Index / 273