

Preface – an act of supererogation?

An inquiring mind must return again and again to the problem of origin or cause... physicians have dug away at diverse etiologic theories or facts; physical or psychic; general or individual; genetic or acquired; fundamental or contributory. When a crime is committed, everyone in the vicinity is suspect.

William Lennox, Epilepsy and Related Conditions, 1960

Thus Lennox opened his chapter on “The diverse sources of seizures,” and indeed he devoted a great many pages of his famous book to the question of etiology. Yet, 50 years later, causation is an aspect of epilepsy now somewhat neglected in the scientific literature on epilepsy, in the classification of epilepsy, and in the conceptualization of epilepsy at a clinical and experimental level. It was to go some way to remedying this deficiency that this book was conceived.

Kinnier Wilson in 1940 wrote that the listing of all causes of epilepsy would be an *act of supererogation*, but the editors of this book beg to differ. This is the first book ever published, as far as we know, which is devoted to the topic of causation in epilepsy, and we have attempted within its 800 pages to catalog the known causes of epilepsy, and corral these into a single tome.

Such an attempt is only possible because of the great advances made in imaging, molecular biology, and molecular genetics in the last 40 years or so, and we believe that progress has now been sufficient to permit at least a stab at a comprehensive listing of causation. The literature on epilepsy has rapidly increased in recent years. Kinnier Wilson noted that the index catalogue of the US Surgeon-General’s office (1925) contained about 3000 titles and the “Gruhle’s review for the years 1910–1920 deals with some 1000 articles.” In the last 10-year period, a search on PubMed® using the keyword epilepsy produces more than 37 000 references, many of which deal at least tangentially with etiology. It is this literature-base which we have asked our contributors to summarize in the various chapters of this volume.

One striking omission has been the absence of any detailed consideration of etiology in the standard classifications of epilepsy. This is partly because at the time that these schemes were being devised neither modern investigatory imaging methods nor modern molecular biology were available – and the ascertainment of “cause” in life was often simply not possible. Although it was fully recognized that epilepsy was often “a symptom” of neurological disease, the underlying

cause of the symptom was completely absent from the current classification schemes, based as they are largely on clinical semiology and electroencephalography, and it is interesting to muse on what form the epilepsy classification might have taken if MRI scanning had preceded EEG as a clinical investigatory tool.

We thus open this book with, in Chapter 2, the presentation of a draft etiological classification which goes some way we hope to filling the nosological void. The main part of the book is organized according to this classificatory scheme. We have divided the etiologies into four categories: idiopathic epilepsies, symptomatic epilepsies, cryptogenic epilepsies, and provoked epilepsies, and these are defined in Chapter 2. In doing so, of course, we recognize, as Lennox, and many before him, frequently reiterated, that epilepsy is in the great majority of cases multifactorial, and frequently has a developmental basis with therefore a temporal dimension. The epilepsy is often the result of both genetic and acquired influences and also influenced by provoking factors, and assignment in such cases to any single etiology is therefore to an extent arbitrary.

The approach to the problem of etiology between 1860 and 1960 forms the subject of the historical introduction (Chapter 1) which ends with Lennox’s work, and this is included as we believe it is important to understand the evolution of concepts of causation within its historical context.

In subsequent chapters, we have asked the authors to consider their topic in a consistent fashion, dealing with the phenomenon of epilepsy in each etiology, including its epidemiology, clinical features, and prognosis, and any specific aspects of investigation or treatment.

The purpose of the book is to be a comprehensive reference work, a catalog of all the important causes of epilepsy, and a clinical tool for all clinicians dealing with patients with epilepsy. It is aimed at specialists and the interested generalist and it is hoped provides a distillation of knowledge in a form that is helpful in the clinical setting. We hope too that it will act as a clinical guide to scientists probing the dark interior of the subject.

We have attempted to take a worldwide perspective, and have included chapters on the causes of epilepsy that are rare in the West but common in other parts of the world. To match the worldwide spread of the conditions considered here, we have a distinguished faculty with a similar global reach, and

the book has 165 contributors from 21 countries and all continents many of whom are the leaders in their fields.

The editors have exercised a heavy editorial blue pen, have tried to minimize overlap or repetition, and have asked the authors to follow where possible a pre-assigned template. Our contributors have responded magnificently in our opinion, and we extend our grateful thanks for their hard work and for their time and effort. We would like to thank also Professor Jerome (Pete) Engel and Professor Sir John Bell for graciously agreeing to write the foreword to the book. Pete Engel is a famous leader in the field of epilepsy and a prolific author, who has made major contributions to many fields of epilepsy. Sir John Bell is President of the Academy of Medical Sciences and Regius Professor of Medicine at the University of Oxford,

and a renowned medical geneticist. The book is indeed fortunate to have their contributions. We are also enormously grateful to Nicholas Dunton, the Senior Commissioning Editor at Cambridge University Press, who has guided the project since its inception with extraordinary skill and expertise, and without whose assistance the book would not have made it to the shelves. We also thank Assistant Editor Joanna Chamberlin and Production Editor Caroline Brown for their great efforts on behalf of the book. Finally, we would like to thank all our colleagues around the world for their stimulating ideas and knowledge, which have informed and illuminated all the pages of this book.

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