their ability to apply this to the dissemination of complex formations in a concise and useful manner is demonstrated in Figure 18.3 (p. 214). This, shown below, is a reflection on the ability of the basic, but useful nature of the information provided in the systems-based consideration of the application of epidemiological approaches to modern medicine.

Fig. 18.3 (p.214) from 'Epidemiology and Prevention' edited by Yarnell, John (2006) (By permission of Oxford University Press, www.oup.com).

The figure clearly demonstrates the relatively complex notion of a spectrum in the genetic contribution to common, complex disorders. Importantly, this highlights the critical interplay between both genetic and environmental factors in the ultimate formation of observed phenotype.

Before concluding, it is important to pass comment on the final sections of this text, which concentrate on the clinical applications of epidemiology and its relevance to public health. The translation of epidemiological research into clinically relevant information and methodologies is often lost in the theatre of academic diatribe, it however is the ultimate goal for all research of this nature. This is a fundamental principal and crucial section for this book with respect to the presentation of epidemiology as a part of the medical experience and more pragmatically as an aspect of curriculum-relevant material. Reflecting earlier parts, the final two chapters provide practice scenarios and informative case studies in order to present the importance of epidemiology in medicine.

Overall, this is an entry-level text, well designed and written for medical and dentistry students. It covers, albeit at a superficial level, most of the main topics in modern epidemiology, although may be found wanting with respect to more specific aspects; including the limitations to epidemiology, statistical approaches to epidemiological research and the idiosyncrasies of system-specific fields of epidemiological research. This lack of detail is an important criticism of this text, especially as a core text for undergraduates, although if employed as a ‘first-sight’ of epidemiology, this guide will be of great value.

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Epidemiological Methods in Life Course Research is the third book in the Life Course Approach to Adult Disease Series. The first two volumes in the Series introduced readers to the contribution of life course research to the understanding of the aetiology of a range of adult diseases. Epidemiological Methods in Life Course Research is not about specific diseases or disease pathways. Its aim is ‘to describe the methods now used and being developed to study individual differences in reaction to adverse exposures across the life course, and the mechanisms by which risk factors may influence present, but in particular, future health, that is the essential temporal and developmental aspect of life course epidemiology’.

The book comprises two distinct parts, with the first half focusing on study design and issues related to the planning and data collection stages of epidemiological research. Chapter 1 briefly introduces readers to life course epidemiology using examples and goes on to discuss models of risk development over the life course. Chapter 2 describes different study designs used in life course research and discusses their advantages and disadvantages. It is also concerned with issues related to measurement at the individual level. Design and measurement related issues are also the focus of Chapter 3, however this chapter turns our attention to health-related social influences such as the family and work environment as well as the broader social context. Chapter 4 introduces readers to the relatively new field of genetic epidemiology, and includes a critical overview of study designs, existing population-based studies and methods of genetic analysis. Chapter 5 tackles life course intervention studies, highlighting that knowledge generated by life course research could and should inform the design of interventions, as well as the studies undertaken to evaluate them.

The second half of the book focuses on the statistical challenges that arise from life course data and the methods available to researchers when analysing such data. Chapter 6 tackles a question
that is central to life course research. Its aim is ‘to describe statistical methods to characterize growth patterns in such a way as to relate them to later outcome’. Chapter 7 introduces methods for dealing with missing data, a common problem in longitudinal studies. Chapters 8 and Chapter 9 introduce the statistical modelling frameworks for longitudinal and multivariate data often generated and analysed in life course epidemiology.

As the focus of this book is methodological, many of the wide variety of topics covered are not exclusive to a life course approach. However, in this book, they have been presented and discussed in context, from a life course researchers’ perspective. Therefore, the book conveys both the conceptual as well as the practical complexities and methodological challenges associated with a life-course approach. These challenges are manifest in both the design and data collection phase as well as in the data analysis stage of epidemiological research. Epidemiological Methods in Life Course Research presents these challenges and offers a comprehensive overview of the methods available to successfully meet them.

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