Preface

We can trace the origins of this book to the start of a personal friendship and professional collaboration of over 40 years when we first exchanged views at the Institute for Transport Studies, University of Leeds, in 1973 about the similarities and differences between US and UK transportation studies. At that time one of us (DB) was on leave from the University of Pennsylvania, the other (HW) was at the very start of his academic career in transportation. Much more recently we started to write about the developments in these countries (Boyce and Williams, 2005). What began as a comparative interest gradually broadened into a study of the evolution of ideas in the field of urban travel forecasting. The advent of retirement has allowed us to rethink and develop this project, which has proved stimulating, frustrating and almost overwhelmingly challenging.

From very modest beginnings in Detroit and Chicago in the 1950s, interest in travel behaviour and forecasting has expanded into a world-wide activity of deep relevance to students and academics in a variety of disciplines, and to transportation planning professionals in all cities of the world. Some choose to study travel behaviour through sheer interest, while others have a more direct and urgent involvement in employing forecasting models to confront and anticipate the challenges of what is collectively understood as the urban transportation problem. The theories and models adopted to understand and forecast travel behaviour and the transportation planning framework within which they are set continue to have a profound influence on the way our cities function and how they develop.

This field is one of the finest examples of multi-disciplinary research and practice, where over the years ideas and methods derived from the natural and engineering sciences have both vied with and combined with those from a range of social sciences to guide the practice of planners and the decisions of public officials. Throughout the past six decades, the contributions from a wide range of disciplines can be clearly identified. The application of urban travel forecasting is computationally and data intensive, much of the relevant literature is technical, and a good deal is expressed mathematically, often conveying the impression of solidity, reliability and logical rigour. But there are many views on the adequacy

of the techniques, methods and theories which support travel forecasting, and this has always been the case. We shall encounter a wide variety of viewpoints in the course of this book.

While many texts, reports and review papers cover different periods in the development of the subject, with different degrees of detail, we know of no unified account of the evolution of the field that is both sufficiently detailed and widely accessible. To write a history of these times is a daunting challenge, which we have attempted with very limited recourse to mathematics, but also without oversimplifying the essential ideas at the heart of the subject. We hope this book will interest academics, transportation planning professionals and concerned citizens, of whom many take an interest in planning decisions heavily reliant on travel forecasts. Above all we hope that it will serve the needs of students at the undergraduate, master's and doctoral levels in transportation engineering, operations research, economics, regional science, geography, environmental studies and transportation planning, as a prelude to more detailed study. We emphasise that this is not a text on 'how to do' travel forecasting, but we see it complementing standard texts as part of a course of study. Nor will any new travel forecasts be found here, although we report on many that have been made in the past. We hope to convey our fascination for the application of technical procedures within the social sphere, the ideas that underpin them, and why we believe it all ultimately matters greatly to the quality of life in cities throughout the world.

The field is fortunate to have benefited from the efforts of several remarkable people. We salute their contributions in grappling with undoubtedly one of society's most challenging and urgent problems – that of urban transportation. We have written to several of them, some of whom are long retired, to get a sense of the context and spirit of the times in which they worked, the way they viewed relevant problems and the innovations they proposed. Sometimes their views have been expressive and presented with such clarity that we have, with their permission, used their words directly. This exchange of views has been crucial in helping us to understand the origins and background of ideas and innovations, particularly where these might have differed from more standard historical accounts.

We have benefited greatly from the comments on these developments, and our account of them, from numerous individuals, in particular Staffan Algers, Richard Allsop, Kay Axhausen, John Bates, Martin Beckmann, Alan Black, Peter Bonsall, John Bowman, Michael Bruton, Walter Buhr, Richard Carr, Michael Clarke, Robert Cochrane, Denvil Coombe, Roger Creighton, Peter Davidson, Robert Dial, Birgit Dugge, Ronald Eash, Marcial Echenique, Paul Emmerson, Sven Erlander, Suzanne Evans,

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