

Preface

My work in migration modeling and regional population dynamics and projections began in 1965, shortly after I had started to work on two reports for the California State Development Plan, as a member of the Center for Planning and Development Research at the University of California at Berkeley. I had never taken a course in demography, and at that time was a post-doctoral student in operations research, having just completed an advanced course on stochastic processes, which included lectures on Markov chains.

Those lectures motivated and shaped my efforts to introduce a *spatial* dimension to the demographer's non-spatial cohort-survival population projection model—efforts which culminated in the publication in 1966 of my first article on the subject in the journal *Demography* and in 1968 the publication of my first book: *Matrix Analysis of Interregional Population Growth and Distribution* (Rogers 1968).

Two years later, I moved to Northwestern University, and with the help of two superior doctoral students, Jacques Ledent and Frans Willekens, developed a formal demographic paradigm that I called multiregional demography. Soon thereafter, in 1975, my second book on population modeling: *Introduction to Multiregional Mathematical Demography* was published, and Willekens and I moved to Austria to join the International Institute for Applied Systems Analysis (IIASA), an East–West think-tank housed in a Habsburg palace, located just outside of Vienna, in a little town called Laxenburg. Shortly after, we were joined by Ledent and another graduate student of mine, Luis Castro, as well as a multinational collection of scholars who joined us for varying periods of time at IIASA to contribute to our work on multiregional demography. In 1983, I moved to the Institute of Behavioral Science (IBS) and the Department of Geography at the University of Colorado in Boulder where, with the help of another collection of my graduate students, I continued to carry out research on topics related to multiregional demography, focusing especially on various applications of that methodology, publishing my third, fourth, and fifth books on multiregional demography. In 1995, John Wiley and Sons issued my sixth book on this particular topic,

Multiregional Demography: Principles, Methods and Extensions. Finally, in 2010 Springer published my book on the indirect estimation of migration, co-authored with my former Ph.D. students Jani Little and James Raymer.

Nathan Keyfitz's book *Introduction to the Mathematics of Population* in 1968 introduced me to uniregional mathematical demography and led me to generalize his results to the multiregional case. In 1977, he came out with a second book, entitled *Applied Mathematical Demography*, which showed how the models of mathematical demography, presented in his earlier book, could be used to find answers to commonsense questions that would be serviceable to those working on population and related matters, whether or not they cared to go deeply into the mathematics behind the answers. Following Keyfitz, I attempt to do something of the same for multiregional demography in this book, which I view as a capstone of my 50 years of research in multiregional demography.

Because over the past 50 years of published research I co-authored so many articles with my graduate students, not surprisingly, this book draws heavily on those collaborations. In particular, I received a great deal of help from and collaborations with first-rate students of different vintages, namely Luis Castro, Jacques Ledent, and Frans Willekens, who came to me at Northwestern in the early 1970s and then followed me to the International Institute of Applied Systems Analysis (IIASA) in Laxenburg, Austria. Then in the mid-1980s, during my early years at CU Boulder, I was helped by and collaborated with Alain Belanger, Jani Little, and John Watkins.

Finally, James Raymer, who began his graduate studies at Boulder in the mid-1990s, co-authored 16 papers with me over the next 20 years and made extraordinary contributions to the research reported in this book. All collaborators were essential to this book's development. I also had help over the years from a number of other former Ph.D. students of mine, namely Jennifer Woodward, Sabine Henning, and Lisa Jordan, and a few Masters students, particularly Kathy Gard, Cecile Hemez, Robin Taylor Wilson, and Junwei Liu. To all, my sincerest thanks; I couldn't have done it without you.

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Professors Richard Rogers and Robert McNown. Professor James Raymer, at the Australian National University, and Jani Little, Director of IBS Computing and Research Services, both read this work in manuscript form, for which I am most grateful. Any remaining errors are mine.

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Reference

Rogers, A. (1968). *Matrix analysis of interregional population growth and distribution*. Berkeley: University of California Press.

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