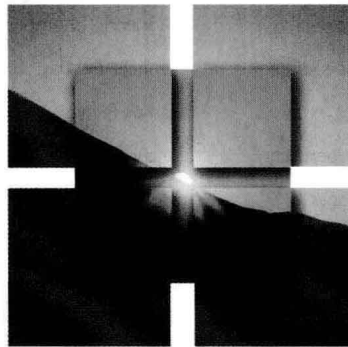


FOUNDATIONS *of* MACROECONOMICS



Robin Bade
Michael Parkin

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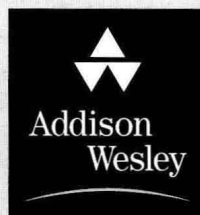


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FOUNDATIONS *of* MACROECONOMICS

The challenge and thrill of learning a new subject is like climbing a mountain. When we set out at the mountain's base, we are unsure of the way up. Along the way, we sometimes feel lost. But as we progress upward, we see ever more clearly the path we've followed, even the parts where we felt lost, and we see how our path fits into a bigger and broader picture.

Students, like mountaineers, benefit enormously from the experience of those who have scaled the peaks before them and from the maps that these earlier climbers have made. They also benefit from practicing on smaller peaks. And they gain perspective by pausing on the climb and looking back at where they've been on their ascent.

Our aims in *Foundations of Macroeconomics* are to travel with you on a journey of discovery, to support you every step of the way so that you are never disoriented or lost, and to help you understand and appreciate the economic landscape that surrounds you.

The cover of this text symbolizes our aims. The mountain range is the terrain of economics that we're going to scale, understand, and appreciate. The rising sun and *Foundations* icon are our light sources—the clearest and most sharply focused explanations and illustrations of economic principles and ideas. The icon also emphasizes the idea of building blocks that fit one on top of another but that stand on a firm foundation. Each block is a small and easily handled object that can be understood on its own and then more keenly appreciated as part of a larger picture.

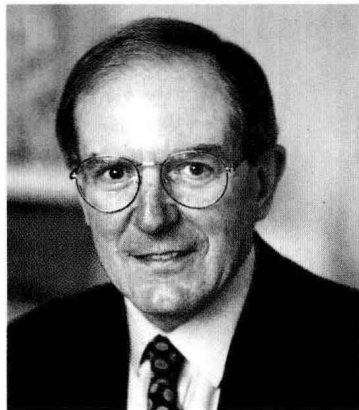
**To Erin, Tessa, Jack,
and Abby**

About the Authors



Robin Bade was an undergraduate at the University of Queensland, Australia, where she earned degrees in mathematics and economics. After a spell teaching high school math and physics, she enrolled in the Ph.D. program at the Australian National University, from which she graduated in 1970. She has held faculty appointments at the University of Edinburgh in Scotland, at Bond University in Australia, and at the Universities of Manitoba, Toronto, and Western Ontario in Canada. Her research on international capital flows appears in the *International Economic Review* and the *Economic Record*.

Robin first taught the principles of economics course in 1970 and has taught it (alongside intermediate macroeconomics and international trade and finance) most years since then. She developed many of the ideas found in this text while conducting tutorials with her students at the University of Western Ontario.

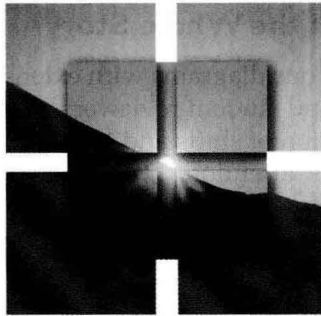


Michael Parkin studied economics in England and began his university teaching career immediately after graduating with a B.A. from the University of Leicester. He learned the subject on the job at the University of Essex, England's most exciting new university of the 1960s, and at the age of 30 became one of the youngest full professors. He is a past president of the Canadian Economics Association and has served on the editorial boards of the *American Economic Review* and the *Journal of Monetary Economics*. His research on macroeconomics, monetary economics, and international economics has resulted in more than 160 publications in journals and edited volumes, including the *American Economic Review*, the *Journal of Political Economy*, the *Review of Economic Studies*, the *Journal of Monetary Economics*, and the *Journal of Money, Credit, and Banking*. He is author of the best-selling textbook, *Economics* (Addison-Wesley), now entering its Sixth Edition.

Robin and Michael are a wife-and-husband duo. Their most notable joint research created the Bade-Parkin Index of central bank independence and spawned a vast amount of research on that topic. They don't claim credit for the independence of the new European Central Bank, but its constitution and the movement toward greater independence of central banks around the world were aided by their pioneering work. Their joint textbooks include *Macroeconomics* (Prentice-Hall), *Modern Macroeconomics* (Pearson Education Canada), and *Economics: Canada in the Global Environment*, the Canadian adaptation of Parkin, *Economics* (Addison-Wesley). They are dedicated to the challenge of explaining economics ever more clearly to an ever-growing body of students.

Music, the theater, art, and walking on the beach provide their relaxation and fun. They don't have a dog, and if they did, they wouldn't call it Keynes.

Preface



Why?

With Parkin's *Economics* (now entering its sixth edition) an established, best-selling principles of economics textbook, why have we written *Foundations of Macroeconomics* and its companion *Foundations of Microeconomics*? Is this rational behavior?

We think so. We have been driven to write *Foundations* by what our own students and several hun-

dred of our fellow economists in colleges and universities across the United States have repeatedly told us. Economics is a core competency for the responsible citizen and is a foundation tool for every type of career. But the challenges of learning and teaching economics are formidable. Our students have diverse backgrounds and learning styles. We must fit an entire course in macroeconomics into too few weeks. And we must meet the challenge of using new technologies in our classrooms.

As we contemplated these challenges, it became clear to us that to meet them, we needed to rethink the way we teach our subject and to create a new learning system for our students.

LOWERING THE BARRIERS TO ENTRY

Most economics professors want to teach a serious, analytical course that explains the core principles of our subject and helps students apply these principles in their lives and jobs. We are not content to teach "dumbed-down" economics. But most students drown rather than learn to swim when thrown into the deep end of the pool. In this book and its accompanying learning tools, we make painstaking efforts to lower the barriers to learning and to reach out to the beginning student.

We focus on core concepts. We steer a steady path between an overload of detail that swamps the students and a minimalist approach that leaves the student dangling with too much unsaid. We explain tough concepts with the simplest, most straightforward language possible, and we reinforce them with clear,

fully explained graphs. And we offer students a rich array of active learning tools that provide alternative ways of accessing and mastering the material.

■ Focus on Core Concepts

Each chapter of *Foundations* concentrates on a manageable number of main ideas (most commonly three or four) and reinforces each idea several times throughout the chapter. This patient, confidence-building approach guides students through unfamiliar terrain and helps them to focus their efforts on the most important tools and concepts of our discipline.

■ Diagrams That Tell the Whole Story

We developed the style of our diagrams with extensive feedback from faculty focus group participants and student reviewers. All figures make consistent use of color to show the direction of shifts and contain detailed, numbered captions designed to direct students' attention step by step through the action. Because beginning students of economics are often apprehensive about working with graphs, we have made a special effort to present material in as many as three ways—with graphs, words, and tables—in the same figure. And in an innovation that seems necessary but is to our knowledge unmatched, nearly all of the information supporting a figure appears on the same page as the figure itself. No more flipping pages back and forth!

■ Many Learning Tools for Many Learning Styles

Our text and its integrated print and electronic learning package recognize that our students have a variety of learning styles. Some learn easily by reading the textbook; others benefit from audio and visual reinforcement. All students can profit from an active learning approach. Your students' textbooks come with access to a suite of innovative learning tools, including tutorial software, an eText featuring animated graphs with audio voiceovers, interactive quizzing, and more.

PRACTICE MAKES PERFECT

Everyone agrees that the only way to learn economics is to do it! Reading and remembering doesn't work. Active involvement, working problems, repeated self-testing: These are the ingredients to success in this subject. We have structured this text and its accompanying electronic and print tools to encourage learning by doing. The central device that accomplishes this goal is a tightly knit learning system based on our innovative *Checklist-Checkpoints* structure.

■ Checklists

Each chapter opens with a *Chapter Checklist*—a list of (usually) three or four tasks the student will be able to perform after completing the chapter. Each item in the Checklist corresponds to a major section of the chapter that engages the student with a conversational writing style, well-chosen examples, and rich and carefully designed illustrations.

■ Checkpoints

A full-page *Checkpoint*—containing a Practice Problem with solution and a parallel Exercise—immediately follows each chapter section. The Checkpoints serve as stopping points and encourage students to review the concept and to practice using it before moving on to new ideas. Diagrams and tables bring added clarity to the Checkpoint problems and solutions.

Each Checkpoint also contains an exact page reference to corresponding material in the Study Guide as well as a reference to the corresponding section of *eFoundations*, our online learning environment. We describe these learning tools more fully below.

■ Chapter Checkpoints

At the end of each chapter, a *Chapter Checkpoint* summarizes what the student has just learned with a set of key points, a list of key terms, and a set of exercises, many of which send the student to our Web site for further information or data.

■ Conveying the Excitement

Students learn best when they can see the point of what they are studying. We show the point in a series of *Eye On ...* features and in *Economics in the News*. Current and recent events appear in *Eye on the U.S. Economy* boxes. We place our present experience in global and historical perspectives with *Eye on the Global Economy* and *Eye on the Past* boxes. All of our *Eye On ...* boxes connect theory with reality.

Economics in the News, which appears once each chapter, is a brief news item with questions for discussion or assignment. A Web link provides access to a more complete version of the news item, together with links to other relevant information. The Instructor's Manual contains answers to the questions, and a set of PowerPoint presentations enables the news story to be discussed and illustrated in the classroom.

ORGANIZATION

Our text focuses on core topics with maximum flexibility. We cover all the standard topics of the principles of macroeconomics curriculum. And we do so in the order that is increasingly finding favor in the principles course. We believe that a powerful case can be made for teaching the subject in the order in which we present it here. The organizing device is the idea that at full employment, the real economy is influenced by only real variables and the price level is proportional to the quantity of money. This idea has been incredibly productive in advancing our understanding of both the full employment economy and the business cycle. By having a firm understanding of the fundamental forces that determine potential GDP, the student better appreciates the more complex interactions of real and monetary factors that bring economic fluctuations. Further, the student sees that the long-term trends in our economy play a larger role in determining our standard of living and cost of living than do the fluctuations around the trends.

Deciding the order in which to teach the components of macroeconomics involves a balancing act that trades off the cumulative nature of the material against the desire to cover topics that are in the news early in the course. There is little disagreement that the place to begin is with production possibilities and demand and supply, followed by the definitions and measurement of the key macroeconomic variables. We provide a carefully paced and thoroughly modern treatment of these topics.

The course then divides naturally into three parts. The first explains the real economy at full employment (potential GDP, investment, saving, the real interest rate, and economic growth, including policies for achieving faster growth). The second explains the money economy (determining the interest rate in the short run and price level and inflation in the long run). The third explains economic fluctuations (interactions between the real and monetary sectors and stabilization policy issues).

Extensive reviewing suggests that most teachers agree with our view on how to organize the course. But we recognize that there is a range of opinion about sequencing, and we have structured our text so that it works equally well if other sequences are preferred. Some teachers want to follow the measurement material with the aggregate expenditure (fixed price level) model and aggregate demand and aggregate supply. Money and economic fluctuations come next. And the influences on potential GDP and economic growth either come last or are omitted. Our text fully supports this sequence. After Chapter 7, it is possible to jump to Chapter 14 (Expenditure Multipliers) or, if an instructor wishes to skip the Aggregate Expenditures model, directly to Chapter 15 (Aggregate Supply and Aggregate Demand). The money chapters (Chapters 11, 12, and 13) can be covered next followed by stabilization policy (Chapters 16, 17, and 18).

A RICH ARRAY OF SUPPORT MATERIALS FOR THE STUDENT

Foundations of Macroeconomics is accompanied by the most comprehensive set of learning tools ever assembled. All the components of our package are organized by Checkpoint topic so that the student may move easily between the textbook, the Study Guide, eText, interactive tutorial, and online quiz, while mastering a single core concept.

The variety of tools that we provide enables students to select the path through the material that best suits their individual learning styles. The package is technology enabled, *not* technology dependent. Active learners will make extensive use of the *Foundations Interactive* software tutorial and the animated graphics of eText, our online version of the textbook. Reflective learners may follow a print-only path if they prefer.



Study Guide

Neil Garston (California State University-Los Angeles), Tom Larson (California State University-Los Angeles), and Mark Rush (University of Florida) have prepared a Study Guide that is available in both print and electronic formats. The Study Guide provides an expanded Chapter Checklist that enables the student to break the learning tasks down into smaller, bite-sized pieces; self-test materials; expanded explanations of the solutions to the practice problems in the text;

and additional practice problems. To ensure consistency across the entire package, the authors who wrote the questions for the Test Banks also wrote the self-test questions for the Study Guide.

■ Foundations Interactive

A Java and JavaScript tutorial software program that runs in a Web browser, *Foundations Interactive* contains electronic interactive versions of most of the textbook figures. The student manipulates the figures by changing the conditions that lie behind them and observes how the economy responds to events. Quizzes that use five question types (fill-in-the-blank, true-or-false, multiple-choice, numeric, and complete-the-graph) can be worked with, or optionally without, detailed feedback. *Foundations Interactive* is available through the Web site and on CD-ROM.



eFoundations

The eFoundations icons found throughout the textbook refer students to the Foundations Web site, a powerful online learning environment and self-assessment tool. On the Web site, students will find:

- The textbook—the *entire textbook in HTML* with hyperlinks and animated figures, more than 100 of which are accompanied by audio explanations prepared by Morris Knapp (Miami Dade Community College)
- *Foundations Interactive*—tutorials, quizzes, and graph tools that with a click of the mouse make curves shift and graphs come to life
- The Study Guide—the entire study guide, free, online—with online quizzes
- Economics in the News updated daily during the school year
- Online “Office Hours”—ask your question via email and one of us will answer you within 24 hours!
- Economic links—links to sites that keep you up to date with what’s going on in the economy and that enable you to work end-of-chapter Web-based exercises

The power of eFoundations lies not just in the breadth and depth of learning tools available, but also in the way that we have linked the tools together. For example, suppose that a student logs on to eFoundations to take a multiple-choice quiz from the eStudy Guide. When the quiz is submitted for a grade, the student receives a scorecard with an explanation of why answers are correct or incorrect, and a hyperlink to the part of the eText that the student should read to better understand the concept. The student is thus able to navigate easily through the site and to maximize the payoff from her or his study efforts.

■ The Econ Tutor Center

Staffed by qualified, experienced college economics instructors, the Econ Tutor Center is open five days a week, seven hours a day. Tutors can be reached by phone, fax, and email. The Econ Tutor Center hours are designed to meet your students’ study schedules, with evening hours Sunday through Thursday. Students receive one-on-one tutoring on examples, related exercises, and prob-

lems. Please contact your Addison-Wesley representative for information on how to make this service available to your students.

■ Economist.com Edition

The premier online source of economic news analysis, Economist.com provides your students with insight and opinion on current economic events. Through an agreement between Addison-Wesley and *The Economist*, your students can receive a low-cost subscription to this premium Web site for 3 months, including the complete text of the current issue of *The Economist* and access to *The Economist's* searchable archives. Other features include web-only weekly articles, news feeds with current world and business news, and stock market and currency data. Professors who adopt this special edition will receive a complimentary one-year subscription to *The Economist* and Economist.com.

■ The Wall Street Journal Edition

Addison-Wesley is also pleased to provide your students with access to *The Wall Street Journal*, the most respected and trusted daily source for information on business and economics. For a small additional charge, Addison-Wesley offers your students a 10-week subscription to *The Wall Street Journal* print edition and *The Wall Street Journal Interactive Edition*. Adopting professors will receive a complimentary one-year subscription of both the print and interactive versions.

■ Financial Times Edition

Featuring international news and analysis from FT journalists in more than 50 countries, the *Financial Times* will provide your students with insights and perspectives on economic developments around the world. The *Financial Times Edition* provides your students with a 15-week subscription to one of the world's leading business publications. Adopting professors will receive a complimentary one-year subscription to the *Financial Times* as well as access to the Online Edition at FT.com.

A QUALITY-ASSURED SUPPORT SYSTEM FOR THE INSTRUCTOR

Our instructor resource tools are the most comprehensive, carefully developed, and accurate materials ever made available. We recognize and respect the desire of every instructor to use a text and package that contain no nasty surprises—that are safe. This text and package are safe! *Foundations Interactive*, the Study Guide, the Web site, and the Test Banks all key off the Checkpoints in the textbook. The entire package has a tight integrity. We are the authors of *Foundations Interactive* and the Web site and we've played a key role in reviewing and revising the Study Guide, Instructor's Manual, and Test Banks to ensure that every element of the package achieves the level of coherence that students and teachers need.

■ Instructor's Manual

Prepared by Richard Gosselin (Houston Community College) and Mark Rush, the Instructor's Manual contains chapter outlines and road maps, answers to in-text exercises and Economics in the News questions, additional exercises with solutions, and a virtual encyclopedia of suggestions on how to enrich class presentation and use class time efficiently.

■ Three Test Banks

Three separate Test Banks, with more than 11,000 questions, provide multiple-choice, true-false, numerical, fill-in-the-blank, short-answer, and essay questions. Mark Rush reviewed and edited questions from five dedicated principles instructors to form one of the most comprehensive testing systems on the market. Our questions authors are Ali Ataiifar (Delaware County Community College), Diego Mendez-Carbajo (Illinois Wesleyan University), William Mosher (Assumption College), Cindy Tori (Valdosta State University), and Nora Underwood (University of California, Davis). These same questions authors also wrote questions for the Study Guide and Web site to ensure consistency across the entire package.

■ PowerPoint Resources

Working closely with Charles Pflanz (Scottsdale Community College), we have played a large role in creating the PowerPoint tools. Every figure and table—every single one, even those used in Checkpoint questions and solutions—is included in the PowerPoint lecture notes, many of them animated so that you can build them gradually in the classroom. We have created these figures and determined the optimal build sequence for those that are animated. They are all produced with the same degree of clarity and precision as the figures in the text.

For instructors who prefer to make up their own PowerPoint notes and who want larger versions of the figures, we've also provided a set of full-screen figures that can be used alone or can be cut and pasted into the instructor's own PowerPoint presentations. We've also provided special PowerPoint shows on the Economics in the News feature of each chapter. These materials might be used to motivate when starting a new topic, or used as a wrap-up and summary.

■ eFoundations

The instructor side of eFoundations includes all of the same resources as for students, but with the addition of PowerPoint lecture notes, classroom experiments resources, and an online "Consult the Authors" feature—ask your questions and make your suggestions via e-mail, and one of us will answer you within 24 hours!

■ Overhead Transparencies

Full-color overhead transparencies of *all* figures from the text will improve the clarity of your lectures. They are available to qualified adopters of the text (contact your Addison-Wesley sales representative).

■ Instructor's Resource Disk with Computerized Test Banks

This CD-ROM contains Computerized Test Bank files, Test Bank and Instructor's Manual files in Microsoft Word, and PowerPoint files. All three Test Banks are available in Test Generator Software (TestGen-EQ with QuizMaster-EQ). Fully networkable, it is available for Windows and Macintosh. TestGen-EQ's graphical interface enables instructors to view, edit, and add questions; transfer questions to tests; and print different forms of tests. Tests can be formatted by varying fonts and styles, margins, and headers and footers, as in any word-processing document. Search and sort features let the instructor quickly locate questions and arrange them in a preferred order. QuizMaster-EQ, working with your school's computer network, automatically grades the exams, stores the results on disk, and allows the instructor to view and print a variety of reports.

■ FastFax Testing

FastFax Testing is designed for instructors who do not have access to a computer or an assistant who can help prepare tests for students. Simply choose from a large pool of questions in the print testbank and include custom headers, if you like. Fill out the test information sheet that lists instructor-selected questions and test preferences that describe how the test should be generated. You may even request multiple forms of a test and receive answer keys for each one.

Turnaround time is usually 48 hours or less and test pages can be mailed or faxed back to you by the date the test is needed. FastFax Testing is fast, reliable, and free to qualified adopters of this text.

■ CourseCompass

A dynamic, interactive online course management tool powered by BlackBoard, CourseCompass provides flexible tools and rich content resources that enable instructors to easily and effectively customize online course materials to suit their needs. Now instructors can track and analyze student performance on an array of Internet activities. Please contact your Addison-Wesley representative for more details.

ACKNOWLEDGMENTS

Working on a project such as this generates many debts that can never be repaid. But they can be acknowledged, and it is a special pleasure to be able to do so here and to express our heartfelt thanks to each and every one of the following long list, without whose contributions we would have had a lesser product.

Mark Rush is our Study Guide, Instructor's Manual, and Test Bank coordinator and manager. He assembled, polished, wrote, and rewrote these materials to ensure their close consistency with the text. He and we were in constant contact as all the elements of our text and package came together. Mark also made many valuable suggestions for improving the text and the Checkpoints. His contribution went well beyond that of a reviewer. And his effervescent sense of humor kept us all in good spirits along the way. Working closely with Mark, Neil Garston and Tom Larson wrote content for the Study Guide and Richard

Gosselin wrote content for the Instructor's Manual and questions for *Foundations Interactive*. Ali Ataiifar, Diego Mendez-Carbajo, William Mosher, Cindy Tori, and Nora Underwood wrote questions for the Study Guide and the Test Banks. Charles Pflanz created the PowerPoint presentations and Morris Knapp provided the audio for the animated figures on our Web site.

The ideas that ultimately became *Foundations* began to form over dinner at the Andover Inn in Andover, Massachusetts, with Denise Clinton and Sylvia Mallory. We gratefully acknowledge Sylvia's role not only at the birth of this project but also in managing the entire development team. Denise has been our ongoing inspiration for almost ten years. She is the most knowledgeable economics editor in the business, and we are privileged to have the benefit of her enormous experience.

The arrival at Addison-Wesley of Victoria Warneck has blessed us with the talents of an outstanding sponsoring editor. We are in awe of Victoria's extraordinary editorial craft. It has been, and we hope will for many future editions remain, a joy to work with her.

Mary Clare McEwing has been our indomitable development editor. She, with help from Dottie Dennis, has rounded up the best group of reviewers we've ever worked with. And she has steered the project along through three full redrafts and polishes. Mary Clare also began the design process with focus groups that told us what teachers and students look for in the design of a textbook. And Gina Hagen converted the raw ideas into this outstandingly designed text. Meredith Nightingale provided the detailed figure designs.

Meredith Gertz did an incredible job as editor of our print supplements and coordinated the work of our large team of coauthors. Andrea Basso helped Meredith by managing the reviews of all our print supplements.

Melissa Honig, our technology guru, built our Web site and worked tirelessly to help develop *Foundations Interactive*. She has been a constant source of high energy, good sense, level headed advice, and quickly found creative solutions to all our technology problems. And Roxanne Hoch provided cheerful editorial assistance and managed the creation of the PowerPoint resources.

Nancy Fenton, our unflappable production supervisor, ensured that all the elements eventually came together to bring our text out on schedule. Sally Simpson, our electronic production administrator, performed her magic to make our pages look beautiful. Jim Rigney managed the supplements production process and ensured that all the print supplements stayed on schedule. And Hugh Crawford oversaw the manufacturing process, and worked with the printers and binders to produce beautiful, on-time books.

Our marketing manager, Adrienne D'Ambrosio, has added enormous value, not only by being acutely intelligent and having a sensitive understanding of the market, but also by sharpening our vision of our text and package. Jenny Jefferson stayed late many nights fielding requests from the sales force and Jennifer Berkley managed our online marketing efforts.

Karen Hill and Ingrid Mount of Elm Street Publishing Services provided development, photo research, and production coordination. Our copy editor, Barbara Willette and supplements copy editor Sheryl Nelson gave our work a thorough review and helpful polish.

Richard Parkin, our technical illustrator, created the figures in the text, the dynamic figures in the online version of the text, the illustrations in *Foundations Interactive*, and the animated versions of the figures in the PowerPoint presentations

and contributed many ideas to improve the clarity of our illustrations. Laurel Davies created and edited the *Foundations Interactive* database and acted as its accuracy checker and reviewer.

Jeannie Gillmore, our personal assistant, worked closely with us in creating *Foundations Interactive* and served as a meticulous accuracy checker. Kevin Young Beckwith of Clark University also provided a careful accuracy review. Jane McAndrew, economics librarian at the University of Western Ontario, went the extra mile on many occasions to help us track down the data and references we needed. Ann Parkin came to our rescue in the closing weeks of this project and helped with a final accuracy check of the pages, table of contents, glossary, and index.

Finally, our reviewers, whose names appear on the following pages, have made an enormous contribution to this text. In the many texts that we've now written, we've never seen reviewing of the quality that we enjoyed on this project. It has been a pleasure (if at times a challenge) to respond constructively to their many excellent suggestions.

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