Preface

When the first edition of this book came out in 1990, I joked that most authors spend a number of years working on a topic and then write a book about it, but I had written the book first and planned to then begin working on the topic. This was no exaggeration. It is a matter of record that my very first publication on object recognition or agnosia was the book! My backward, and some might say nervy, approach worked out surprisingly well. The agnosia case literature was an unmined resource, and experimental research on agnosia to answer questions about object recognition had barely begun. It seemed to me that the first order of business was simply reviewing and systematizing the case literature and posing some basic questions that could, in principle, be answered by such cases. A book was as good a way to do this as any. So I wrote *Visual Agnosia*.

Looking back at the first edition, it had an extremely high question-to-answer ratio. Many of the unanswered questions formed the basis for the next several years of my research: Are faces "special?" Is their geometry represented differently from that of other objects? Are there orthography-specific brain systems? How could they develop? Do "living things" constitute a special category for the visual system? For the semantic system?

In the fourteen years since the first edition came out, these and many other questions about visual object recognition have been addressed by myself and others around the world. Where before there were just a lot of interesting questions, now there is consensus on some answers, healthy differences of opinion on others, new questions, and plenty of solid science to make the second edition a very different book from the first.

My own contributions in the interim were undertaken with a very talented and congenial group of collaborators. In particular, four of my

students played a major role in the research described here, and it is a pleasure to acknowledge their contributions. My former graduate student Shaun Vecera, now Associate Professor at the University of Iowa, took a set of general issues concerning attention, grouping, and early vision and translated them into a productive research program encompassing patient-based research, psychophysics, and computational modeling. The best thing I did for him as an advisor was move to Penn, leaving him to rely his own judgment and creativity. Thad Polk, a former postdoc and now Associate Professor at the University of Michigan, was the driving force behind our studies of perceptual processes in reading. In the course of building several computational models and conducting both behavioral and imaging experiments, Thad uncovered important new insights about the effects of experience on pattern recognition and also learned first-hand the meaning of "going postal." Former postdoc Jim Tanaka, now Professor of Psychology at the University of Victoria, took the lead in our work on parts and wholes in face recognition. Jim also saw the broader relevance of this work beyond face recognition and has made it one aspect of his multifaceted program of research on perceptual expertise. Paddy McMullen, another former postdoc now in Canada, where she is Associate Professor at Dalhousie University, was my partner in puzzlement for our initial studies of category-specific semantic impairments. She was able to get us past that stage with her thoughtful analysis and experimental rigor. Former postdocs Matt Kurbat, Cathy Reed, Sharon Thompson-Schill, and Lynette Tippett, graduate students Randy O'Reilly, Marcie Wallace, and Kevin Wilson, and research assistants Karen Klein, Karen Levinson, Carol Rabinowitz, and Matt Stallcup all worked with me on projects that were related in some way to the topic of this book, and their contributions are all gratefully acknowledged.

Much of the research reported here would have been impossible without the help of our agnosic subjects. These individuals worked with us in experiments that were often tedious and always difficult, designed as they were to elicit the subjects' agnosic impairments. I especially want to acknowledge the participation of Lincoln H., a remarkable person who has taught me much about visual agnosia, as well as experience, adaptability, and hope.

Barbara Murphy of MIT Press provided advice, encouragement, and an occasional kick in the pants, without which this book would probably

still be a manuscript. Katherine Almeida expertly guided the book through production. I am grateful to them both. My colleague Russell Epstein at Penn and Tim Rogers of the MRC Cognition and Brain Unit in Cambridge, England read drafts of chapters and gave me their very knowledgeable and diplomatic advice, which I have tried to follow. Finally, my acknowledgments would not be complete without thanking three wise, generous and fun colleagues for their collaboration and tutelage in the area of visual object recognition, Todd Feinberg, Jay McClelland, and Mike Mozer.