Preface

This volume presents the results of a small workshop, ''Visual Attention and Cortical Circuits,'' held in early 1999 at Two Harbors, Catalina Island, some twenty miles offshore from Los Angeles. The aim of the workshop was to enlarge the common ground between the psychology, neurobiology, and theory of selective visual attention in the mammalian visual system, and to place key findings into a shared framework. The cover picture of this volume (*Red Bridges,* by Aristarch Lentulov) was chosen because it expresses the optimism and hope associated with sturdy bridges (e.g., between disciplines). We felt that this aim could be best achieved by a small and intensive workshop, in parallel with the publication of a book. Although the participants did not represent a full cross section of current attention research, they did share an affinity for interdisciplinary approaches to attention. Piecing together the contributions of psychophysics, biology, and computational theory on the subject of attention remains, at least for now, an untidy affair with much room for argument.

The book focuses mainly but not exclusively on the effects of visual attention in the ventral and dorsal streams of visual cortex in humans and monkeys, and the associated changes in visual performance. As a result, there is a fair amount of overlap between chapters. Naturally, each chapter exemplifies the approach of one particular group, but the book as a whole also makes several larger points. A brief overview chapter summarizes the main findings of the fourteen substantive chapters, and also attempts to formulate some of the larger points that emerge.

The book is aimed at researchers and advanced students from a variety of fields, including but not limited to neurology, neurobiology, psychology, cognitive science, and computer vision. The presentation is as simple and clear as possible, and the contributors have made a significant effort to make the material accessible and to provide illustrations of the highest quality. Our aim as editors was to ensure that all chapters presuppose a similar degree of expertise, so that they can be readily compared. In view of the range of disciplines represented, and the different conventions observed by each, this was not always easy.

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