This book represents an interdisciplinary approach to neuroscience with chapters covering computational modeling, visual psychophysics, functional brain imaging, single-cell physiology, and clinical patient cases.

The best example of filling-in involves the retinal blind spot, which is perceptually "filled-in" with background color. While filling-in is generally associated with visual processes, the view promoted in this book is that some forms of filling-in are related to processes in the auditory and somatosensory modalities, as well as the motor cortex. It is argued that filling-in may be a more general property of short-term cortical processing, as well as more long-term neural "interpolation" resulting in cortical reorganization. The book will be of interest to researchers and graduate students in systems neuroscience, cognitive neuroscience, vision science, neuroimaging, perceptual psychology, computational neuroscience, and philosophy of mind.

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