

The Nerve of It

Review of *Mindwaves*, Colin Blakemore and Susan Greenfield, eds., Basil Blackwell, Ltd.: Oxford, 1987

Particularly at Oxford, one is reminded how recently science (or natural philosophy) emerged from philosophy in general. Physics and chemistry, for example, are specialized subjects in their own rights, and no one now maintains that logical deductions from commonplace intuitions about physical and chemical systems should count for much. Mind and consciousness are among the last of the natural phenomena to remain the nearly exclusive province of the philosopher and the ordinary man.

This situation is gradually changing. It has long been clear that the brain is the organ of the mind. The temptation to try to look inside the mind by looking inside the brain has been overwhelming. Physiologists and anatomists have cut brains into bits and have studied the electrical, chemical, and metabolic activities of nerve cells in relation to mental activity. Neurologists and psychologists have uncovered the most startling disorders of mind and perception in people whose brains have been damaged. These include apparently conflicting goal-directed behaviors elicited from the two arms of a person whose forebrain had surgically been split in two, and the most amazing anomalies of colour vision, such as the one described by Oliver Sacks and Roger Westwood in last November 19th's issue of the *New York Review*.

The inroads of neurological science over the past hundred years into the brain have been followed by increasing attempts to formulate biological theories of mind. Most recently, digital computers have challenged the long-held association between mind and intelligence by mastering tasks that were, until recently, universally regarded as needing intelligence, such as playing master-level chess or winning over the World Champion backgammon player.

The claims of neural, cognitive, and computer scientists to be studying the mind have been taken to be a form of scientific imperialism by many philosophers. The philosophers make fun of the notion that a machine, or the neurobiologist's concept of the mind as something very like a machine, could understand or be conscious. The scientists ask how else can one study the mind than by learning about the structure and function of the brain, its organ, and constructing machines, real or conceptual, that do some of the things the mind does.

Four years ago, the Oxford community was privileged to hear a seminar on these issues. *Mindwaves* presents many of the papers from that seminar. These papers are organized around the following questions: Persons: what makes an individual? Animals: how do they think, and do they have minds? Machines: could they have minds? How brains could have minds, and why? What is mind? The introductory essays to some of these parts are as thought-provoking as many of the chapters.

A virtue of the book are that its subject is addressed from nearly all of the currently exciting perspectives. Even better, those writing for the book are not the greatest entrepreneurs and propagandists of the movements in favor of each perspective. We hear enough charlatanry on these topics in the popular press. Rather, the authors of the papers in this book make thoughtful contributions that, in many cases, directly address the issues and arguments taken up in other chapters. The apt illustrations and overall presentation of the book are especially pleasing. A fault of the book may not be apparent to the Oxford reader, for whom, perhaps uniquely, the details conveyed in the occasionally precious chapter introductions of the authors' fellowships at this, that, and the other college (or even high school!) may have some meaning.

Perhaps the highest recommendation for this book is that the reader sometimes aches to hear the authors carry on their discussions. The book gives a sense of (but leaves one envious of the participants in) the "vigorous debate, often continuing over wine until well after midnight" that followed the original presentation of these papers.

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