

he books under review in this issue all have something to do with visual perception, including the physiological process of seeing things and the psychological process of interpreting them. As we shall find, what the eye sees is not necessarily what the brain perceives. The first two books focus on the faculty of sight: the last one has more to do with how we look at the things we see.

Eye and Brain: The Psychology of Seeing

Even though Richard Gregory's book is now over 30 years old, it still offers a rich introduction to the whole topic of seeing, and to the complex relationships between what the eye 'sees' and what the brain makes of this information. In fact, we do not believe what we see: we believe what our brains make of it. The first part of the book, up to Chapter 8, deals with the basics. Seeing also 'involves knowledge of the object derived from previous experience, ... not limited to vision but may include other senses: touch, taste, smell, hearing, and perhaps also temperature or pain'. Gregory goes on to discuss light; how the eyes evolved over millennia; the structure and functions of the brain; the structure of the eye and its

ability to perceive depth and distance through stereoscopic vision; brightness and light/dark contrast; seeing movement and the way we work out what is moving relative to what is fixed; and seeing colour – a fascinating chapter, showing once again that we tend to see what we expect to see. Chapters 9–13 move into, for me, even more interesting areas. The book discusses illusions, which may involve



ambiguity, as in the gestalt pictures in which we see now one thing (two faces), now another (a vase), or paradox, as in the trompe l'oeil pictures of Escher and others, or hallucinations, where we see things that are not there at all. (For those interested in these aspects, see Roger Shepard's Mind Sights, and Oliver Sacks' recent book Hallucinations.) In Chapter 10, Art and Reality, Gregory explains perspective and the many ways in which the eye can be tricked into seeing size and distance distorted. In Chapter 11, he discusses whether seeing has to be learnt or whether it is innate. He describes the ingenious experiments with blind people who regain

their sight, and with babies. His question: Is language necessary for consciousness? moves him into a consideration of the nature of consciousness in the final chapter. Consciousness is still the unsolved 'big question'. Among other things, he asks whether machines can have consciousness, and what the function of consciousness might be. (For a brief but dense introduction to the topic, see Susan Blackmore's Consciousness.) Gregory writes clearly but does not condescend to his readers. He has a delightful boyish enthusiasm for his subject, and gives helpful examples from everyday life. (Try looking at yourself in the back of a spoon, then on the inside, for example.) The book is also copiously illustrated with diagrams, drawings and photographs.

The Mind's Eye

As we have come to expect from him, Oliver Sacks' *The Mind's Eye* is a collection of case studies of patients with unusual medical conditions, all presented with a deep human concern. In one, a woman loses her ability to read music, then words, then even the ability to perceive the shapes of objects. Strangely, however, she remains able to write without problems, and continues to play





the piano from memory. In another. following a blood clot on the brain, a man develops aphasia, losing not only his speech but all language. He compensates by sharpening his non-verbal communication skills. In another, a writer cannot make out the Latin alphabet, though he can see the letters clearly. Familiar objects look strange to him. He, too, is still able to write flawlessly - but cannot read what he has written! He forces himself to recover language, partly by tracing words in the air, then by using his tongue to shape them, and then succeeds in writing a novel based on his condition. In another case, Sacks deals with 'visual agnosia' - the inability to recognise faces (and places) - a condition he himself suffers from and which is a constant social and professional handicap. He then deals with a case of lost stereoscopic vision. The flat, two-dimensional world experienced by strabismus sufferers can only be imagined by those with full stereoscopic vision. The case he presents is of a woman who recovers stereoscopic vision in mid-life by dint of strenuous exercises - a further example of the brain's plasticity. In Chapter 6, Sacks documents his own struggle with eye cancer, which deprived him of vision in one eye and seriously impaired his peripheral vision in the other: 'I have a large "nowhere" in my right visual field and my brain.' The final chapter discusses blindness and the differing reactions to it. In one case, there is 'total deep blindness', compensated by the sharpening of other senses - the re-allocation of visual capacity to sound and touch. Some other cases construct virtual visual worlds internally, as if there were a screen in their minds on which they project their own images. (For a wonderful description of the inner visual world of a blind person, see Lusseyran's



And There Was Light.) This raises the issue of mental imagery and its significance for thought and learning. The final sentence of the book bears thinking about: 'Language, that most human invention ... can allow all of us, even the congenitally blind, to see with another's eyes.'

Ways of Seeing

Ways of Seeing is based on an iconoclastic BBC series back in the 1970s. John Berger is a neo-Marxist critic who has made it his business to shake up the way we look at art and other images. The book is short but punchy. Of the seven chapters, which can be read in any order, three consist only of pictures. In Chapter 1, Berger's main target is 'cultural mystification' in the service of the status quo, and what he terms the 'boqus



religiosity' attached to works of art: 'The art of the past is being mystified because a privileged minority is striving to invent a history which can retrospectively justify the role of the ruling classes ... Mystification is a way of explaining away what might otherwise be evident.' He deplores the way original works of art are now valued principally for their market value. He also has interesting observations about the way the ubiquity of modern means of reproduction has destroyed the authority of art. Chapter 3 deals with the female image in art and the way it has served male objectives: 'Men act and women appear.' 'Women are there to feed the appetite, not to have any of their own.' He distinguishes between the naked and the nude: 'Nakedness reveals itself. Nudity is placed on display.' This powerful chapter is supported by some impressive juxtaposition of female images. In Chapter 5 he attacks the commodification of art, especially oil paintings. Oil paintings are 'not so much a framed window open to the world, as a safe set into the wall, a safe in which the visible has been deposited'.

Berger also shows how Holbein's *The Ambassadors* refers out to a whole new world of acquisitive ownership. (For a more extended description of how Vermeer's paintings carry clues to the emerging new world of global trade, see Timothy Brook's *Vermeer's Hat*). In the

final chapter, he makes a frontal assault on the way images have been hi-jacked by advertising in the service of consumerism: 'The purpose of publicity is to make the spectator marginally dissatisfied with his present way of life ... the anxiety on which publicity plays is the fear that having nothing you will be nothing.' What publicity does is 'to propose to each of us that we are not yet enviable - yet could be'. For those wishing to pursue these ideas at greater length, I suggest Stuart Ewen's All Consuming Images. Berger's book is a feisty reminder of the way images influence the way we see the world, and a timely warning that we need to develop a critical way of seeing.



If nothing else, these books should make us feel grateful for the gift of sight. They also help us understand just how complex a faculty this is. Most of all, they remind us of the importance of not passively *seeing*, but actively *looking*. There can be few more important things for a teacher than to notice things and interpret them, and to pass on these skills to their students.

Books reviewed:

Berger, J Ways of Seeing Penguin 1972 Gregory, R Eye and Brain: *The Psychology* of Seeing Weidenfeld and Nicholson 1977 Sacks, O *The Mind's Eye* Picador 2010

Books referred to:

Blackmore, S Consciousness: A Very Short Introduction OUP 2005

Brook, T Vermeer's Hat Profile Books

Ewen, S *All Consuming Images* Basic Books 1999

Lusseyran, J And There Was Light Floris Classics 1963

Sacks, O *Hallucinations* Knopf 2012 Shepard, R N *Mind Sights* Freeman and Co 1990



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