

Vagaries of thought

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A History of the Mind: Evolution and the Birth of Consciousness. By Nicholas Humphrey. *Chatto and Windus/Simon and Schuster: 1992. Pp. 238. £16.99, \$22.00.*

The Strange, Familiar and Forgotten: An Anatomy of Consciousness. By Israel Rosenfield. *Knopf/Picador: 1992. Pp. 157. \$20, £14.99.*

THERE has been quite a kerfuffle about consciousness recently. Books have appeared on the subject by, among others, Daniel Dennett, philosophical spokesman for the artificial-intelligence community, and John Searle, its most formidable critic*. Not long ago, Roger Penrose invoked the fact of consciousness as evidence against the idea of artificial intelligence†. In June this year, the Wellcome Foundation awarded consciousness a certificate of scientific respectability in the form of a two-day international meeting in London. At the beginning of August, Dennett appeared on BBC television to announce that after centuries of scientific and philosophical fumbling we at last had a theory of "the phenomenon of consciousness", namely his own. In the September issue of *Scientific American*, Francis Crick and Christof Koch claim that "the problem of consciousness" is on the verge of solution, but that Dennett's theory is not quite right. Now Nicholas Humphrey, biologist and communicator, speculates on the nature and evolution of consciousness, and Israel Rosenfield, a neurologist of the school of Oliver Sacks, ventures a slim volume on its anatomy. As Humphrey remarks disarmingly in his preface:

There have been not a few — perhaps too many — books on mind, consciousness and evolution published in the last few years (two of them by me). And, as shelves sag and appetites fade, I should explain what is different about this one.

One unusual feature of *A History of the Mind*, as Humphrey warns, is the little that it has to say about computers, artificial intelligence or quantum mechanics. But even more distinctive is the author's evident respect for his subject matter, informed by a fine literary sensibility. The book is exceptionally well written and its arguments attractively presented, even if they sometimes fail to carry conviction.

Humphrey summarizes his central

* Daniel Dennett's *Consciousness Explained* was reviewed in *Nature* 356, 26 (1992); John Searle's *The Rediscovery of Mind* will be reviewed in *Nature's* Autumn Books supplement (26 November).
† See the review of Roger Penrose's *The Emperor's New Mind* in *Nature* 341, 393 (1989).

thesis in the aphorism "I feel, therefore I am." Turning the tables on Descartes — and on his own earlier views — he identifies the birth of consciousness with the advent of "raw sensation" as opposed to sensory perception or rational thought. This is a good point. We deprive people and animals of consciousness — by the use of anaesthetics — in order to save them from *feeling* anything, not from seeing or thinking. Humphrey makes a persuasive distinction between perception and sensation; but he then attempts to establish that perception can take place without sensation, dredging up 'skin vision' and 'blindsight' — both a long way from common experience — as relevant evidence. My unease at this line of thought became acute at the top of page 162, where the author postulates that not one but two processes accompany "the activity of sensing". One is something called "sentition", occurring centrally; the other is a barrage of "sentiments" or actual physical events at the body's surface, triggered by

effluent signals. A critical reader might well switch off at this point; or if not here, on encountering the author's U-turn on page 173:

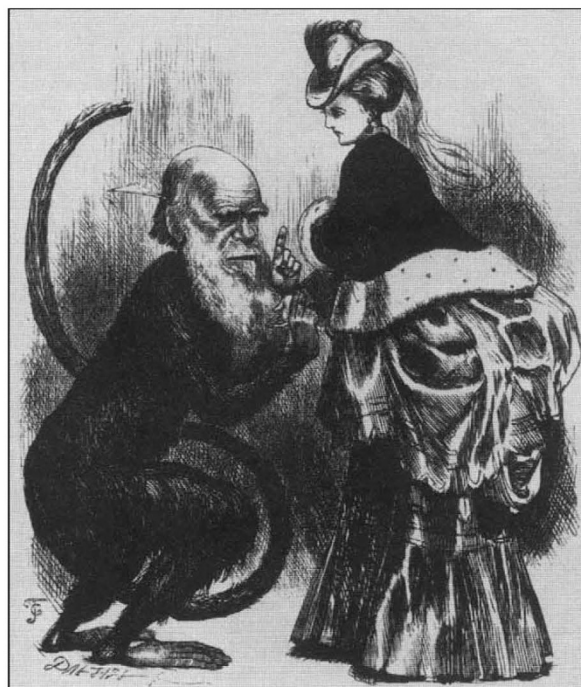
If the Mark-1 theory cannot cope, we need a Mark-2 theory that, while retaining the essential features of the previous version, is better adapted to the facts.

Mark 2 is, mercifully, a bit better, as it requires only that sensations, to qualify as such, be registered neurally in some location associated with the bodily location from where they originate (if I take Humphrey's meaning correctly). This location he identifies as the body's image in the cerebral cortex, thus attributing animal consciousness to re-entrant neuronal activity. Unfortunately the theory is less than specific about the sufficient conditions for consciousness to arise in creatures other than people and animals. What about plants, for example? Or robots? Conceding that it might be possible in principle for an engineer to construct a conscious machine, Humphrey dismisses this as impractical on the arguably irrelevant grounds that

there would be no way of re-creating the natural *historical traditions* that have given the activity occurring in natural brains the peculiar *modal quality* of consciousness.

(Could it have been an awareness of historical tradition that moved him to appear on the dust cover in the likeness of a mediaeval saint?)

Rosenfield's book *The Strange, Familiar and Forgotten* starts well, stressing



Feminine flushes — the caption reads: "Really, Mr. Darwin, say what you like about man; but I wish you would leave my emotions alone!" In *The Expression of the Emotions*, Darwin wrote that "a pretty girl blushes when a young man gazes intently at her" because she immediately thinks about the "outer and visible parts" of her body, and this alters their "capillary circulation". The cartoon is taken from Adrian Desmond and James Moore's *Darwin*, now published in paperback by Penguin (price £9.99). "Unquestionably the finest biography ever written about Darwin", wrote Stephen Jay Gould in his review in *Nature* 355, 215 (1992).