

BOOK REVIEW

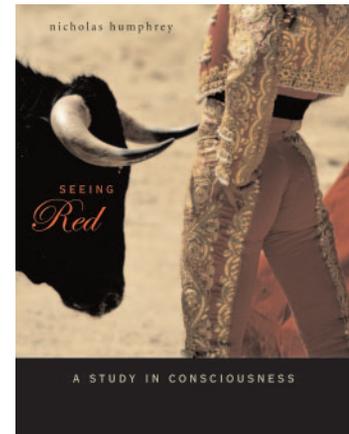
A daring reconnaissance of red territory

It used to be, not so long ago, that philosophers—and a few ‘humanistic’ psychologists—were the only academics who could bear to talk about consciousness in public. Then about the time the first President Bush declared the 1990s the Decade of the Brain—I doubt there is a causal connection—scientists who up till then would never have been caught dead writing about the mysteries of consciousness changed their minds and started holding forth with abandon. Somewhere in the collective psyche a dam broke, releasing a flood of books and articles by distinguished scientists as well as philosophers about how (or whether) the brain could be the seat of consciousness. Many of the literally hundreds of books that have appeared have a single idea about the key to solving the mystery, and perhaps the stampede was provoked by their authors’ sense that we were entering the end game, and if they wanted to share in the glory, they had better get their pet idea into the limelight as soon as possible. This hunch that a single flip in everybody’s thinking will unlock the secrets is not implausible. The stubborn intractability of the problem of consciousness could well be because some assumption that everybody finds too obvious to consider denying is just false. If there were no such complacently shared mistake, would not we have solved the problem by now? The solution is bound to be deeply counterintuitive at first blush, and Nicholas Humphrey is not alone in having a candidate for an outrageous reversal that will do the trick. He is unique, however, in his combination of audacity and circumspection, an intellectual tightrope walker, proposing hypotheses that seem utterly unpromising—even silly mistakes—at first, and then reassuring the reader by acknowledging their dubiety, and promising a vista that will soon make sense of them and solve nagging problems in the bargain. At least sometimes he delivers on these promises, and perhaps the rest will just take yet more tweaking.

Humphrey’s latest book, a sequel to his 1992 book, *A history of the mind*, is based on a series of lectures he gave at Harvard in 2004 to the Mind/Brain/Behavior Initiative Distinguished Lecture Series, and is written in a style intended to re-create as nearly as possible the informal give-and-take of those lectures, in which the audience sat bathed for much of the time in the intense red light reflected from a giant screen behind the lecturer. It is very much Humphrey’s

SEEING RED: A STUDY IN CONSCIOUSNESS
By *Nicholas Humphrey*
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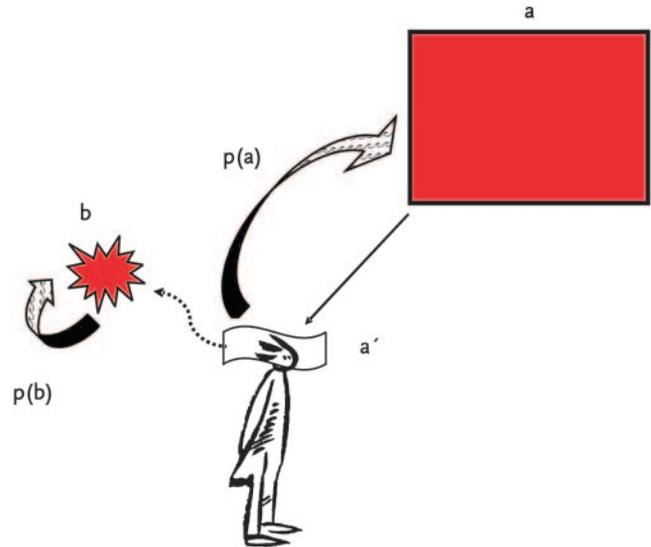


purpose to get readers to set aside what they think they know about seeing red and to experience seeing red anew, so they can reflect on their experience and not just on some remembered or imagined episode of seeing red in the past. He is attempting to resurrect and sharpen a suitably hard-to-credit claim made by the brilliant 18th century Scots philosopher Thomas Reid: our minds—our brains—are equipped with two very different and surprisingly independent ‘provinces’ or systems, *sensation* and *perception*, and contrary to all appearances, it is *not* the case that sensation provides the raw material out of which perceptions are then refined. We can have perception without sensation; the two systems serve different functions, and exhibit different pathologies. This is certainly not what just about everybody has thought since Reid’s contemporary countryman, David Hume, taught us that *sense impressions* were the source of the simple and complex *ideas* that furnish our minds with the stuff of both perception and fantasy, imagination, dreaming and reflective thought. Empiricism insists that stimulation of the ‘sense’ organs must somehow provide the information our brains extract in perception, but Humphrey proposes to bifurcate the inbound trajectories spawned by this peripheral stimulation, a more radical division than, say, the dorsal and lateral streams described by Milner and Goodale (1995), and not based on a specific neuroanatomical distinction. Briefly, the *function* of sensation is not to inform us but to *matter to us*, and the evolution of the

sensation system thereby brings into existence not just *mattering* but the *us to which* the mattering matters! (Nothing matters to a daisy or a clam, though they both are alive; they are blessed with basic self-protective maintenance systems without having any sense of a self that needs protection.) According to the 19th century philosopher/logician Gottlob Frege, ‘An experience is impossible without an experient. The inner world presupposes the person whose inner world it is’, and Humphrey leverages Frege’s principle (which has been resisted by some, including me) into an explanation of how natural selection could have selected for *selves that matter to themselves* by selecting for the sensation system that provides the oomph. Though descended from the cruder responsibilities of creatures as simple as amoebas, our sensation systems reverberate in a way that creates something new: a self that cares. ‘Our’ sense of the importance (to us!) of our own precious selves is what motivates us to strive (and reflect) in life-loving ways no mere vegetative life forms can muster. Moreover, although both our experiences and our selves are, at bottom, just physical aspects or parts of our brains, they *appear to us* to be immaterial, and this too is an adaptation: ‘*this* bit of the world becomes reorganized precisely so as to impress the subject with its *out-of-this-world* qualities.’ (p. 128).

Who, then, are ‘we’? Does the charmed circle of self-loving experients include all apes, all primates, all mammals, all warm-blooded creatures, all vertebrates? This is Humphrey’s version of the stumper posed by Thomas Nagel’s still-echoing 1974 essay ‘What is it like to be a bat?’ and Humphrey attempts no answer—yet.

Is this science or is this philosophy? You really cannot engage in science until you have well-formed questions to pose, and philosophy is the unavoidably speculative exploratory activity in which you cast about for these fruitful questions. When Roger Penrose (1989) or Francis Crick (1994) or Antonio Damasio (1994, 1999) campaign for their visions of the issues, they are engaging in science-based philosophy, and they expose themselves to all the risks of conceptual confusion, covert self-contradiction and logical fallacy that professional philosophers love to pounce on. Meanwhile, those philosophers who decline to rise from their a priori armchairs and resolutely avert their gaze from the relevant sciences persist in issuing comically overconfident declarations about what must be the case and what is ‘impossible in principle’. I collect these gems: among the phenomena that have been deemed flat impossible by philosophers of my acquaintance are blindsight, Anton’s syndrome, colour anomia, illusory conjunction and intermittent anosognosia (of the sort exposed by caloric irrigation). Moreover, some philosophers who do pay attention to empirical work on consciousness are intent on ‘discovering’ reasons why a science of consciousness is utterly impossible, and while at their best they play a valuable devil’s advocate role, much of the wrangling is more combative than constructive. Those defeatist philosophers—now known as mysterians—may in the end be right, of



course, but on strategic grounds alone, we should postpone consideration of their self-fulfilling prophecy.

Whereas Damasio takes Descartes and Spinoza (Damasio, 2003) on board for serious contemplation, and Penrose wrestles with the philosophical literature exploiting Gödel’s Theorem and Turing machines, Humphrey takes on not just Reid and Frege, but a wide spectrum of contemporary philosophers, and he knows how to take them seriously. He is also a more self-consciously philosophical scientist in his concern with methodological issues. Indeed, he can be seen to be pioneering a unique method of inquiry, moving through the treacherous terrain with a different agenda, not trying to build an irrefutable fortress of theory on a massive foundation of empirical results (or a priori principles), but cherry-picking for useful treasures, accepting clues from all kinds of sources often left unutilized—faint hunches and feelings, the putative insights of poets and artists, turns of phrase and old metaphors. He is almost embarrassingly open to suggestions from all sides: anecdotes, tidbits of deeply personal and possibly idiosyncratic introspective memory, daring interpretations of case histories of pathology, and phenomenological exercises for the reader to perform accompanied by Humphrey’s apologies and cajolings. The result is a rich and suggestive but avowedly half-baked pudding of *what-ifs* made palatable by his frequent acknowledgements of the tentative and speculative nature of the inquiry.

Finding one’s way around in this lawless domain of pitfalls and false horizons is not easy. Humphrey is well aware that his readers will cling to their favourite presuppositions as the only ‘fixed points’ in sight, and he has developed a characteristic form of fearlessness in challenging them: knowing full well that certain sorts of musings are just, well, too flaky to be taken seriously, he draws attention to their flakiness and muses away! For instance, p. 114: ‘*What is it like to be a painting?*’ What a question. The answer has to be: probably not much. But . . .’ This is a recurring trope, and the ‘but’ is the key element, for Humphrey is always keen to take

an idea that others would swiftly dismiss as a hopeless confusion, a category mistake or some even more egregious slip-up, and dress it up a little, encourage the reader to squint *just so*, and come away thinking that there may be something to this idea after all! He reminds me at such moments of Douglas Hofstadter, another highly original thinker who is unabashed in his willingness to think the thoughts that are simply beneath the dignity of other thinkers!

But does this method yield good results? It is hard to tell, at this early stage. I am perhaps disabled as a dispassionate judge by my allegiance to my own pet ideas on these topics, but that bias is balanced by a longstanding friendship with the author, so I am doubly burdened. The best I can do is to try to articulate a few of the striking features of Humphrey's vision and suggest that readers who think it is just obvious that Humphrey is barking up the wrong tree, or that he is on to something important, will discover that there is little that is obvious about these issues once they come to grips with the curious twists of the tale he wants to tell.

A sensation (such as the visual sensation of red), Humphrey claims, is a kind of *action*, something we *do*, not something that just *happens to us*, and it evolved from the *bodily* responses to noxious and beneficial impingements of simpler animals. He invents the intransitive verb, *redding*, as the name for this 'active first-person response' and this lets him draw attention to the important fact that when we experience something red we do not just learn something about *it*; we learn something about *ourselves* (roughly: this thing provokes *redding* in me) but although he finds several different ways of bringing us face to face with instances of redding, he never succeeds—to my satisfaction—in distinguishing it sufficiently from other real or imaginable responses to red. For instance, what would it take to make a robot that did not just discriminate red things from other things (a feat already uncontroversially accomplished by roboticists) but that *redded* in their sensed presence (and was able to notice and appreciate its own redding for what it was)? I am quite sure that Humphrey would agree that this is *not* impossible—he is no dualist, and exhibits none of the protein chauvinism that afflicts some critics of AI—but I also suspect that he would insist that any such robot would have to have had something very much like our evolutionary history. But I may be wrong. Would not an *implied* evolutionary history according to which the roboticist designed the robot's equipment *as if* it had had a few million years of hard knocks to test its prowess provide all the pedigree needed for genuine redding? Humphrey emphasizes the *personal* and *authorial* aspect of redding, but since he acknowledges that at the subpersonal level, these actions consist, exhaustively, of neuronal events mindlessly plugging away, it is not clear to me how he thinks he can elevate some such phenomena to personal-level dignity.

Those familiar with the 1992 version of his theory will find crisper, more compelling formulations and some extensions of the basic claims, as well as consideration of some of the pet

ideas that others have been developing in the meantime. The importance of the temporal extension of the experienced present, and the role of re-entrant or recurrent circuitry—themes emphasized by a variety of other theorists in recent years—are folded into his account, and the junctions are suggestive if problematic. For instance, Victor Lamme (2004) has taken on Ned Block's proposed distinction (e.g. Block, 1996) between 'phenomenal consciousness' and 'access consciousness' and argued that a single recurrent loop is necessary for what he calls phenomenal experience, but he has no explanation—as he acknowledges (2004, p. 871)—for why this simple recurrence brings awareness in its train. And indeed, the problem with Block's proposed distinction is that the very idea of a pure ('phenomenal') consciousness divorced from all 'access' consciousness is hard to make sense of, as I have argued on several occasions (e.g. Dennett, 2005). How does phenomenal *consciousness* differ from phenomenal *unconsciousness*? Can there be unconscious discrimination of colours, for instance? If so, does this discriminatory state lack 'phenomenality'? What *is* phenomenality when divorced from any subject or experient, to use Frege's term? Humphrey also permits himself the use of Block's term 'phenomenal' while disavowing Block's quest for phenomenality-without-access. He sees, indeed, that for phenomenality to *matter* it has to matter to *someone*, and that mattering must be a sort of access. And he has some hints—but only hints—about how the self might arise out of the temporally extended recurrent processes. (See Metzinger, 2003, for a related approach to 'phenomenal' consciousness.) He also has a suggestive and typically original discussion of the possible role of mirror neurons in grounding empathy.

It was Humphrey who discovered blindsight, working in Larry Weiskrantz's laboratory in Oxford in the late 1960s with a destriate monkey, Helen, whom he patiently coaxed into recovering a sort of visual competence in the absence (he opines) of visual sensation. Inspired by this success, he tried, a few years later, to use much the same techniques to help a young woman, blind since age three, to learn to see after her eyes were restored to working order by cataract surgery. In spite of intensive and imaginative efforts on his part, and clear evidence that some visual competence was there to be exploited, this project did not have a happy outcome, since, as he wrote in his research report at the time, "Seeing", far from being a rewarding activity, had become a tiresome duty for her, and left to herself she soon lost interest in it.' Eventually, she put on her dark glasses, took up her white cane, and went back to being blind. These two profoundly unusual encounters with the ill-understood boundaries of sight and experience have had a powerful influence on Humphrey's thinking ever since—if only all who work on consciousness could have such intellectual adventures to flavour their imaginations!—and one aches to know if Humphrey's own interpretations of them would still stand if we had more details about the cases. It is well nigh impossible to answer the tantalizing question: did they teach

Humphrey important things the rest of us still find hard to imagine or take seriously, or did they seduce him down a theoretical cul de sac? Whatever the answer, there is no doubt that his methods have already made a large contribution to our understanding of consciousness. In fact, a price he pays for his impressionistic methods is that he influences other thinkers almost subliminally; more than a few theorists have absorbed major elements of his message and then innocently reworked them and presented them as their own pet ideas. If that is a projectible pattern, we can anticipate that this book will be regarded as a somewhat eccentric and dismissible foray by many whose own work will subsequently bear the stamp of his thinking, whether they realize it or not. Among philosophers, unwitting reinvention rivals denunciation as candidates for the sincerest form of flattery, and by those measures, Humphrey has had more than his share of deserved accolades.

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