

Red in the head

Seeing Red: A Study in Consciousness

by Nicholas Humphrey
Belknap Press: 2006. 160 pp.
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Josh Weisberg

As a graduate student at the University of Cambridge in the late 1960s, psychologist Nicholas Humphrey discovered that a monkey named Helen, whose visual cortex had been surgically removed, could nonetheless interact visually with her environment. Helen's condition — later termed 'blindsight' by Humphrey's research supervisor Lawrence Weiskrantz when it was found in humans — became one of the most widely discussed bits of empirical data in the burgeoning field of consciousness studies. Blindsighted subjects guess at well above chance about the shape, orientation and even colour of stimuli that they insist they cannot see. The syndrome presents a kind of vision without conscious qualitative 'feel' — a provocative dissociation between the function of vision and its first-person appearance.

Since then, Humphrey has written extensively and insightfully about consciousness. His most recent work, a slim and elegant volume entitled *Seeing Red*, provides a charming, if brief, summary of his current views, blending themes culled from psychology, philosophy, and even art and poetry. It also offers intriguing speculations on the evolutionary function of consciousness. According to Humphrey, consciousness evolved to appear inexplicable, creating the impression that we are more than mere physical machines. Its mystery is its evolutionary *raison d'être*.

Humphrey holds that blindsight demonstrates the dissociability of sensation (the feel of experience) and perception (our awareness of the world). He adopts the bold suggestion that sensation is not part of the causal chain leading to perception. Instead, he argues, sensation makes up a separate, more primitive system that plays no direct role in our perception of the world. Sensation is a self-contained evaluative activity — in Humphrey's terms, someone seeing red engages in the activity of 'redding'. Humphrey models this activity on bodily expressions such as smiles: when I'm happy, I smile; when red light tickles my eyes, I respond by redding. However, sensory activity isn't connected to outward expression. Instead, it loops inwards and privately informs the person of the activation of the sense organs. This prompts affective responses, but not perceptions of the world.

In stressing the analogy with expressive activity, Humphrey hopes to mould conscious experience into a form amenable to identification in terms of brain processes. And it is plausible that certain features of expression are shared with sensation. Both smiles and



Red rag to a bull? Nicholas Humphrey boldly argues for a separation of sensation and perception.

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sensations of red are 'owned' by the subject — for example, only you can smile your smile. And both smiles and sensations occur in association with specific body organs. However, we are aware of our sensations with an immediacy that is lacking in the case of smiles. This is part of what it is for those sensations to be conscious. Failing to explain this immediacy leaves us in the dark about why a sensation is conscious. Even if sensation is identified with re-entrant feedback loops in the brain, as Humphrey suggests, we still need to know how these loops make us immediately aware of our sensations.

Although this crucial question is left unresolved, Humphrey's reflections on the evolutionary function of consciousness present an intriguing suggestion: our sense of the inexplicability of consciousness may expose its function. The apparent mystery of conscious-

ness prompts us to see ourselves as more than mere biological machines, and so to strive all the more to preserve our existence. However, a simpler explanation of this sense of mystery might be the lack of direct access to the underlying mechanisms of consciousness. But it is in the nature of such 'just so' speculations that they are extremely difficult to confirm.

In the final analysis, the strength of Humphrey's book lies in its skilful blending of ideas from varied sources to stimulate new ways of thinking about consciousness. In effectively doing so, while presenting a fascinating window on the thought of a distinguished consciousness researcher, *Seeing Red* is a wonderful success. ■

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Energy with meaning

Dictionary of Energy

edited by Cutler J. Cleveland & Christopher Morris

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Ehsan Masood

Where to go for a definition of peak oil? What is an environmental Kuznets curve, and why was OPEC established? The expanding field of energy studies at last has its own encyclopaedic dictionary. Elsevier's *Dictionary of Energy* is all you could want in a book of this kind. Comprehensive and readable, it is a treat for fact-checkers and casual browsers alike.

The dictionary's coverage includes the science of energy, economics, sociology, policy

and energy in world history. The list of entries is peppered with more than 100 commissioned short essays on an array of topics and concepts. Many of these have been written by some of the leading names in the business.

The essay on the theory that oil production is close to peaking, for example, carries the name of the theory's main proponent, Colin Campbell. Robert Costanza, one of the leaders of the field of ecological economics, has provided a short essay on natural capital. The late Charles Keeling contributed an essay on the Mauna Loa curve, which describes the rate of change of atmospheric carbon dioxide over time; Keeling's measurements from the Mauna Loa observatory in Hawaii were one