From Bacteria to Bach and Back: The Evolution of Minds, by Daniel C. Dennett

Shane O'Mara on a profound and humorous exploration of human consciousness

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Make no mistake: philosopher and cognitive scientist Daniel Dennett has written an absolute firecracker of a book, one revisiting in depth and breadth the central theme of his life's work – understanding and explaining how we are conscious (and how we succumb to illusions about the nature of our own individual consciousness). He adopts a vigorous evolutionary perspective, starting right at the outset of life itself, and, moving forward from mindless automata, shows how biological selection gives rise to intelligent action, and to consciousness itself. There is no room here for "hard problem", "Mysterian" or introspective theorising; Dennett shows these approaches to be pointless and misguided.

Dennett's language is wonderfully robust, and reads as if he is carrying on an argument with both himself and the engaged, but somewhat sceptical, reader. The writing is by turns humorous (what other philosopher would use a Guns N' Roses song title, Welcome to the Jungle, as an opening chapter section heading?), wry and profound. It is dotted with brilliant phrasing ("Cartesian wound", "Cartesian gravity", "Skyhooks and Cranes", consciousness as a "user illusion"). It is an exhilarating read; this book deserves to be taken deeply seriously as the best scientific-philosophical approach to understanding how consciousness evolved.

Despite his writing's bravura quality, Dennett is circumspect about what he has achieved: he claims this book is a "sketch, the backbone, of the best scientific theory...of how our minds came into existence, how our brains work with all their wonders, and, especially, how to think about brains without falling into alluring scientific traps". That "especially" does exceptional heavy lifting in the book: above all, Dennett is seeking clarity of theorising about how there are minds, and how it is possible for minds "to ask and answer" the question of how there are minds. The answer is revealed using the classical philosophical method of proceeding by demolishing the alternatives, and presenting a straightforward central argument, caught beautifully by a headline from an interview with Dennett in Corriere della Sera: "Yes, we have a soul, but it's made of lots of tiny robots!"
Late in the book, having undertaken the foundational labour of working from molecules and cells up, Dennett reveals the necessary answer to be that there is no “Cartesian theater” or “imagined homunculus”: that consciousness, cognition and all they entail must be broken up and distributed around “lesser agencies” in the brain. And that feeling of interiority of consciousness? It is just that – a feeling, which we get from the inadequate perspective of introspecting on our consciousness, similar to the user illusion we get from looking at a computer desktop display. We know the desktop doesn’t literally exist, despite acting as if it does – it is a useful illusion created for the user by the PC, and which gives it functions it would otherwise lack. This is a claim that, as Dennett says, turns the “mind inside out”.

One major quibble: Dennett’s Maginot Line defence of memes can be safely ignored as an unnecessary diversion: the meme is an entirely fruitless concept, which, 40 years after its conception, is still ignored in the pages of the *Journal of Neuroscience* and *The Journal of Social Psychology* alike. Otherwise, this is a wonderful book that will shape and drive thinking for years to come.


**From Bacteria to Bach and Back: The Evolution of Minds**  
**By Daniel C. Dennett**  
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