# Obituary – **A very special user illusion**

## Daniel Clement Dennett, born 28 March 1942, died 19 April 2024

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Daniel Dennett, who died on 19 April 2024 aged 82, was a one-off. Not just a brilliant philosopher but a polymath who seemed able to turn his hand to anything. He painted and sculpted in marble and clay, played piano and guitar, sailed his yacht Xanthippe, and, with his wife Susan, bought a farm in Maine where he drove tractors, harvested hay, made cider, felled trees, built fences, and raised chickens. He walked with a beautiful stick he had lovingly whittled into elaborate patterns.

As an undergraduate he transferred to Harvard so that he could confront the philosopher Willard Quine with "corrections to his errors", and received his DPhil from Oxford, studying with Gilbert Ryle. He moved to the University of California at Irvine in the mid-sixties, and then spent most of his career at Tufts University in Massachusetts. He was awarded a raft of prizes and Fellowships, was considered one of the most widely read philosophers of his age and, along with Richard Dawkins, Christopher Hitchens and Sam Harris, rode proudly as one of the *Four Horsemen* of the New Atheism (Dawkins *et al*, 2019).

Perhaps, then, it's not surprising that his last book – an autobiography aptly called *I've Been Thinking* – paints him as a bit too full of himself, too clever by half, you might say. Alone among the deservedly glowing book reviews that followed, the Guardian newspaper called him boastful, conceited, and too prone to 'professorial preening'. The trouble is, he had much to preen about and I'll readily forgive him a bit of boasting when his contributions to philosophy, and especially to the study of consciousness, have been so great. Indeed you could say that his 1991 book *Consciousness Explained* (*CE*) marked the start of the field of consciousness studies as we know it today, more than thirty years on. Although much maligned, and often derided as 'Consciousness Explained Away' this book broke down the burdensome barriers between philosophy and neuroscience, and we've never looked back.

In that year, 1991, I was already teaching a consciousness course at Bristol University and, frankly, there was not much good science or philosophy to go on (that is, if you don't count William James's insights a hundred years before). In 1989, the year I began the course, the British psychologist, Stuart Sutherland, wrote of consciousness that, "Nothing worth reading has been written on it." And he wasn't far wrong. Then *Consciousness Explained* arrived. It's a tough read, even today, because it challenges all our natural, and gloriously wrong, ways of thinking about our own minds, and Dennett systematically uses clever thought experiments and 'intuition pumps', as well as rich data, to reveal the many traps and illusions we fall into. I read it avidly because another polymath, my friend and colleague Richard Gregory, gave me his own copy (which Dan later signed for me), told me to read it

fast – and then issued an invitation. He was going to Oxford to meet with Richard Dawkins, attend Dan's lecture, and have dinner afterwards with Dan and Susan. Would I like to come?!!

In that brilliant lecture, in those olden days of coloured scribbles on overhead transparencies, one idea in particular grabbed my attention. This was an informal finding, using an eye-tracker, that if letters were switched while readers moved their eyes, they failed to notice the change. This seemed so much at odds with the, then, conventional assumptions about how vision works, that I instantly started thinking up experiments. If vision was a bottom-up process of building an ever better picture in the head, we ought to notice such changes, so what was going on? With no expensive eye-tracker, but access to an early computer that could (just about) move an image quickly enough, I was able to force eye movements rather than measure them. In this way, a student and I hoped to show the same effect with realistic images rather than words. The effect proved strong and repeatable, suggesting that the richness of our visual world is an illusion (Blackmore *et al*, 1995), and contributing to the flood of 'change blindness' experiments, with their varied methods, that followed.

This was, of course, Dan's forte, revealing illusions – not visual or auditory illusions but theorists' illusions. We scientists and philosophers may claim to have rejected Cartesian dualism, he said, but then still retain the idea that somewhere inside the mind or brain is an audience of one, 'me', a 'central meaner', sitting in my private Cartesian theatre, experiencing a stream of consciousness, making decisions, and handing out instructions. If you claim to be a materialist but are still tempted to think in this way, you are a 'Cartesian materialist'. Even today, whenever I read books on consciousness and see hints of this lazy way of thinking, I write 'CM' in big letters in the margin. It's amazing how often that is. "Go and read *CE* again", I want to cry.

Dan spent his life trying to drag people along with him against the seductive power of the way we like to imagine our minds. When Chalmers (1995) coined his term 'the hard problem', a few years after *CE*, Dan called it a chimera, a theoretical illusion, a distraction from what we really need to be worrying about. His alternative was the 'hard question' (Dennett, 2018). Rather than the exciting prospects of trying to explain mysterious qualia or the inexplicable experience itself, we should be asking, 'and then what happens?'. When something 'gets into consciousness' what does this cause or modify? It's rather telling that while people talk endlessly about the hard problem, very few try to answer the hard question.

I think of this contrast especially in terms of Baars' (1997) popular global workspace theory (GWT) which, to my surprise, Dan was rather keen on. But I suspect his enthusiasm was because he always had his hard question in mind when most people do not. I suggest there are two radically different ways of understanding both GWT and its later cousin, the Global Neuronal Workspace model (Dehaene, Changeux & Naccache, 2011). The first is the temptingly easy way; when competing items or processes succeed in getting into the GW they 'become conscious' or are 'in consciousness'; they make up the 'contents of consciousness' that are then broadcast to the rest of the 'unconscious' brain. The second is the tough Dennettian way.

Question: And then what happens?

Answer: Nothing special. Thanks to winning the competition to enter the workspace, information is broadcast around the brain which means it has further effects on behaviour, cognition, and speech. But nothing has undergone some magical transformation and turned into 'conscious processing'. It is neural processing all the way down and there is no extra magic that makes a distinction between conscious and unconscious processes, or conscious and unconscious parts of the brain. This counter-

intuitive way of understanding the theories is as neglected as ever, as though people have not read, not taken in, or not wanted to face up to what Dennett was saying. Talk of 'conscious processing' and 'unconscious processing' is as poplar, and as rarely questioned, as ever (e.g. Mashour *et al*, 2020).

Accepting the uncomfortable version is Dennett's Multiple Drafts theory, perhaps the most misunderstood of all theories of consciousness, and the cause of the 'explained away' gibe. It is simple but counter-intuitive. Processing in the brain goes on in multiple layers and places, and in multiple drafts (like drafts of a story) all in parallel. None of it is in or out of consciousness (that would be Cartesian materialism) and nothing special happens to any of it (that would be to give a magical answer to the hard question). All that happens is that when the system is probed in some way, say by requiring an action or answer, we retrospectively attribute consciousness to it. Consciousness is like 'fame in the brain'; being a famous person is not something in addition to having influence in the world, and consciousness is not something in addition to having influence in the brain. Consciousness is real enough but it is not what we like to think it is – in other words consciousness is an illusion.

I never heard Dan getting furiously annoyed, as I probably would, when people so gratuitously misunderstood his ideas. He just took it all in his stride and went on patiently explaining that the self we so fondly care about is, in reality, a 'centre of narrative gravity' or a 'benign user illusion'. Here, though, is something I disagreed with. At least, I agree that the self is a user illusion but not that it's benign. You might say, as many spiritual teachers do, that the illusory self is a fundamental cause of human suffering as we struggle with our fears, dashed hopes, self-blaming, and longing for things to be otherwise for 'me'.

What did annoy him though, and me too, was people accusing us illusionists (Frankish, 2016; Blackmore, 2016) of not believing in experience at all. Christof Koch, in his latest book, writes about contemporary thinkers who "insist, against the evidence of their own senses, that experiences don't exist." (2024 p 7). But this is simply not true. Near the start of *CE*, Dennett describes how the mystery of consciousness struck him anew one morning as he sat in a rocking chair reading a book.

> "I had apparently just looked up from my book, and at first had been gazing blindly out the window, lost in thought, when the beauty of my surroundings distracted me from my theoretical musings. Green-golden sunlight was streaming in the window that early spring day, and the thousands of branches and twigs of the maple tree in the yard were still clearly visible through a mist of green buds, forming an elegant pattern of wonderful intricacy." (1991, p. 26).

He goes on to describe his attention shifting to the Vivaldi he was listening to, and the rocking frequency of the chair as it synchronised with the concerto grosso. "How could *all that* be just something physical happening in my brain? …How could any combination of electrochemical happenings in my brain somehow add up to the delightful way those hundreds of twigs genuflected in time with the music?" (p. 26-7). This, he said, is the mystery that leads us to imagine some kind of mind stuff, something located in a different space. And that imagining is the powerful intuition he systematically tears apart, with the help of his 'intuition pumps'. No, he never denied the existence, or the wonder, of experience, only the theorists' illusions of mind stuff and ineffable qualia. Illusionism, he said, should be 'the obvious default theory of consciousness' (Dennett, 2016).

Then there's evolution. Dan had a marvellously lucid way of explaining the endless design power of the evolutionary algorithm, that simple formula that gives rise to all design in the universe. In his

books *Darwin's Dangerous Idea* (1995, *DDI*) and *From Bacteria to Bach and Back* (2017), he memorably describes evolution by natural selection as a 'get-rich-*slow* scheme, and a 'universal acid' that eats through every traditional concept and leaves our world-view transformed. Although Darwin did not refer to evolution as an algorithm, his famous book *On the origin of species* laid out the three steps of that wonderfully simple process. If some kind of information – and it can be any kind of information at all – is copied with variation and selection, you get "a scheme for creating Design out of Chaos without the aid of Mind." (1995, p. 50). This is inevitable, and no designer is needed. This is surely one of the best reasons for rejecting belief in God, especially the redundant notion of a creator God, as Dan so forcefully did. In *Breaking the Spell* (2006) he argued that religion should never be held off-limits to scientific analysis.

The point that Dan went on to explore, and much more deeply than almost anyone else, was Dawkins' idea that the evolutionary algorithm applies as much to religions as it does to genes; indeed it applies to all cultural items, such as words, songs, habits and skills, recipes and ways of building bridges – in other words, memes (Dawkins, 1976). He was never afraid of pushing unpopular ideas to their limits and that is one of the things I most admired about him. Memetics has always been unpopular, and is still unpopular nearly fifty years after Dawkins coined the term. Yet Dan pushed firmly on with the uncomfortable idea that our minds are made of memes, our very selves are centres of narrative gravity built by the memes we have imbibed over a lifetime, and 'consciousness is *itself* a huge complex of memes (or more exactly, meme-effects in brains)' (1991, p. 210).

That last claim might be a stretch too far for me. Is there not consciousness remaining in moments of silent awe, or in states of meditation and nondual awareness? The live debate over the possibility of 'pure consciousness', with descriptions by many people who describe such contentless states, may lead to some kind of consensus on this one (Metzinger, 2024).

Dennett never gave up on memes, most recently applying these ideas to the worryingly fast evolution of AI. Still lecturing and teaching despite his frailty, he was concerned about what he called 'counterfeit people', those AI characters who trick us into believing they are human and so erode our trust. In an email less than a year before he died, he wrote, 'Now is the time to be pro-active and forceful about memes. "We TOLD YOU that informational things can replicate, and now they are doing it, and we have to face a pandemic of parasitical memes if we don't take immunological steps now!" I hope to keep his ideas on memes alive as this parasitical pandemic spreads ever faster and with less predictable consequences.

Since he died, many students and researchers have told stories of how they reached out to him for help and he generously encouraged and guided them. I was one of those too. When *DDI* came out I was lying in bed with chronic fatigue brought on first by flu and then overwork. I could read for barely fifteen minutes at a time so *DDI* took me many weeks to read. That led to rereading Dawkins' *Selfish Gene*, to remind myself of how the idea of memes came about, and I was hooked. By the time I was well enough to get out of bed I had a whole book on memes written in my head. But would it work? Did my ideas make sense? Could I dare to attempt such a book? I needed Dan.

I knew he would be speaking at the 1996 Tucson conference 'Towards a Science of Consciousness'. So, with wheelchair assistance at the airports, I determinedly got myself there. Then early one evening, when already in bed, I realised there was only one day left, and although I had had brief chats with Dan, I had so much more to ask. Not feeling well enough to get dressed again to take a note down to reception, I figured he was bound to be at the big conference dinner, and rehearsed a polite message to leave on his room phone (no mobiles then) to ask if we could meet the next day.

But he picked up the phone! 'Let's talk!' he said, 'Now's fine. I'll come to your room'. I leapt out of bed, frantically got dressed again, and so it was that we drank our way through a bottle of duty free Scotch and talked and talked, and I didn't care how exhausted I was the next day. He offered plenty of what he called 'avuncular advice', and encouraged me to take the next step in memetics and write the book that then became *The Meme Machine.* As I recorded in my diary, 'he hoped I'd do it well, for his sake, for it would reflect back on him'.

The only topic on which Dan and I disagreed was free will and here we disagreed deeply: compatibilism *versus* illusionism. I think his book *Freedom Evolves* should have been called *Choice Evolves.* There is no doubt that we humans face far more choices than any other creature we know about but, in my opinion, these are not free of the underlying causes in our bodies, brains, and lives. Dan's version of compatibilism, and his insistence on the reality of free will make no sense to me and, like many others, I have struggled to understand why he promoted it so determinedly, and occasionally even aggressively. If the self is a user illusion then surely its claim to have free will is too. He even wrote that free will is probably not what you thought it was – the very definition of an illusion. He once told me that he hoped to convert me to his point of view before he died, a hope that was not fulfilled. In the end, and after long discussions with Dan about this, I think that he was so afraid of the consequences for society if people gave up belief in free will that he had to find a way of preserving it. This is harsh I know, but I agreed with Sam Harris (2014), when he concluded "I have not argued for my position primarily out of concern for the consequences of accepting it. And I believe you have."

Harris and I are long-term meditators, interested in the practice and consequences of living without free will, but Dan was not interested in this or in meditation and spirituality. He said he had tried meditation a few times but clearly did not find it worth pursuing. That first time I met him, walking along to dinner in Oxford after his brilliant lecture, I remarked on how much I loved his ideas about self and how similar they were to the Buddha's concept of no self, or non-self. His stinging reply was, "Don't you think that if someone else had had these ideas two thousand years ago, I would have known about them?"

Despite this, I still find his ideas helpful in my evolving meditation practice as well as in my intellectual study of consciousness. When the first edition of my textbook *Consciousness: An Introduction* was published, I was criticised for including too much Dennett. I did so unapologetically, even while trying to do justice to all the other theories and ideas in this endlessly fascinating field. Twenty years on, the fourth edition, written with my daughter, Emily Troscianko, is still full of Dennett's challenges to just about every more popular idea in the field. As time goes on, and current theories are tested against data and each other, we'll surely find out whether we can ditch the hard problem and answer the hard question instead – and without recourse to magic.

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