

The Death of Dennett and The End of Materialism

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Daniel Dennett (1942–2024)

Daniel Dennett died on 19 April 2024. Here are a few paragraphs from his obituary in *The Guardian*:

Daniel Dennett, who has died aged 82, was a controversial philosopher whose writing on consciousness, artificial intelligence, cognitive science and evolutionary psychology helped shift Anglo-American philosophy from its focus on language and concepts towards a coalition with science.

His naturalistic account of consciousness, purged as far as possible of first-person agency and qualitative experience, has been popular outside academia and hotly opposed by many within it.

One of the so-called Four Horsemen of New Atheism, along with Richard Dawkins, Christopher Hitchens and Sam Harris, he also wrote on Darwinism, memes, free will and religion.

“Figuring out as a philosopher how brains could be, or support, or explain, or cause, minds” was how Dennett, aged 21, defined his project. Having gained a philosophy degree at Harvard University in 1963, he was then doing a BPhil at Oxford University under the behaviourist philosopher Gilbert Ryle, but spent most of his time in the Radcliffe science library learning about the brain....

“Yes we have a soul but it’s made of lots of tiny robots” was the headline of an article about him in the Italian newspaper *Corriere della Sera*, and Dennett endorsed it with amusement. He loved making furniture, building fences, mending roofs, tinkering with cars and boats; and, among the many things he constructed were sets of nested Russian dolls to illustrate his philosophy. The outside doll was “Descartes”; inside that was “the Middle Ghost” (a reference to Ryle’s [1949 book, *Concept of Mind*])—but inside that was a “Robot.” “We are not authorities about our own consciousness,” he said. The robot is masked by the ghost.

Dennett pronounced qualia to be illusions. Ever since Descartes, we have tended to assume that we have “mental images,” as if, said Dennett, we could view little pictures, visible only to ourselves in an inner “Cartesian theatre.” (Guardian, 2024)

Dennett was a, or perhaps *the*, leading proponent of the philosophical doctrine of *materialism or physicalism*. But in my opinion, when Dennett died at age 82, materialism or physicalism also ended its 80 years long post-World War II career as a serious philosophical doctrine. Why? Here’s a seven-step argument

for the impossibility of any and every hard science of consciousness—that is, for the impossibility of any and every materialist or physicalist, naturally mechanistic, or otherwise reductive (e.g., computational or informational) science of consciousness.

Step 1. By *consciousness*, I mean *subjective experience*, which is to say that consciousness inherently involves (i) a first-person or self that’s (ii) egocentrically-centered in orientable space and unidirectional time, (iii) relatively unified, and (iv) immanently reflexive or immediately aware of itself without further ado and without implicitly or explicitly forming judgments or propositional thoughts about itself (= *subjectivity*, aka “consciousness-in”), and also that (v) this self spontaneously and freely enacts or engages in mental acts, states, or processes of various kinds that also inherently possess not only

(vi) some or another qualitative specific character, which tells us “what it’s like,” but also
(vii) some or another semantic content, which tells us “what it’s about” (= *experience*, aka
“consciousness-of”).

Furthermore consciousness has two basic modes: (i) *pre-reflective or non-self-conscious consciousness*, which, in being naturally directed towards cognitive or intentional targets *other than itself*, is *immanently reflexive*, without either implicitly or explicitly forming judgments or propositional thoughts about itself, and (ii) *reflective consciousness*, or *self-consciousness*, which, in being naturally directed towards, or about, *itself AS* a cognitive or intentional target, is *aware of itself allocentrically and objectively*, by implicitly or explicitly forming judgments or propositional thoughts about itself. More simply put, pre-reflective or non-self-consciousness consciousness is *just being* a conscious mind that’s directed towards other things; whereas reflective or self-conscious consciousness is *thinking about itself AS* a conscious mind that’s *ALSO* directed towards other things. For example, as you read the just-previous sentence, you were *pre-reflectively or non-self-consciously* consciously reading that very sentence, whereas, as you read these very words, you’re now *reflectively or self-consciously* conscious of reading this very sentence.

Step 2. By *universal materialism or physicalism*, I mean the doctrine that everything in the world is grounded on contingent, fundamentally physical facts and either *logically strongly supervenient* on those facts (= reductive materialism) or *naturally or nomologically strongly supervenient* on those facts (= non-reductive materialism).

Strong supervenience (Kim, 1993: esp. part 1; Horgan, 1993; Chalmers, 1996: chs. 1-3) is a necessary determination-relation between sets of properties or states of different ontological “levels,” a relation that is weaker than strict property/state-identity, and is usually taken to be asymmetric, although two-way or bilateral supervenience is also possible. But assuming for the purposes of simpler exposition that strong supervenience is asymmetric, then, more precisely, *B*-properties/states (= the higher level properties/states) strongly supervene on *A*-properties/states (= the lower-level properties/states) if and only if (i) for any property/state *F* among the *A*-properties/states had by something *X*, *F* necessitates *X*’s also having property/state *G* among the *B*-properties/states (upwards necessitation), and (ii) there cannot be a change in any of *X*’s *B*-properties/states without a corresponding change in *X*’s *A*-properties/states (necessary co-variation). It follows from strong supervenience that any two things *X* and *Y* share all their *A*-properties/states in common only if they share all their *B*-properties/states in common (indiscriminability).

In turn, *logical strong supervenience* is a super-strong version of strong supervenience which says that the necessitation relations between the *B*-properties/states and the *A*-properties/states are *logical* and *a priori*. Or more simply put: The *B*-properties/states are “nothing more than” and “nothing over and above” the *A*-properties/states. If logical strong supervenience holds, then if there were such a being as an all-powerful and all-

knowing creator God, and if They were to create and/or know all the *A*-properties/states, then They would have nothing more to do in order to create and/or know all the *B*-properties/states. By contrast to logical strong supervenience, *natural* or *nomological* strong supervenience is a modally weaker notion which says that the necessitation relations between the *B*-properties/states and the *A*-properties/states are determined by laws of nature, and hold in all and only the worlds in which those natural laws obtain.

As a specification of universal materialism or physicalism, *materialism* or *physicalism* about the mind-body relation and mental causation says that all facts (i.e., instantiated properties or states) about the human mind are constitutively determined by contingent, fundamentally physical facts. But there are three interestingly different types of materialism or physicalism: (i) *reductive* materialism or physicalism, (ii) *eliminative* materialism or physicalism, and (iii) *non-reductive* materialism or physicalism. Reductive materialism or physicalism—a prime example of which is the mind-brain identity theory so famously criticized by Kripke in *Naming and Necessity* (Kripke, 1972/1980: pp. 144-155)—says that all facts about the human mind are wholly constitutively determined by contingent, fundamentally physical facts, i.e., all mental facts are logically strongly supervenient on contingent, fundamentally physical facts. That is: the human mind is really *nothing over and above* the contingent, fundamentally physical world. Eliminative materialism or physicalism, by contrast, says that, given the truth of reductive materialism, minds are really *nothing at all*: our belief in the existence of minds is a mere illusory folk belief and a conceptual myth. Non-reductive materialism or physicalism, by another contrast, says that some but not all facts about the human mind are wholly constitutively determined by fundamentally physical properties or facts, nevertheless, at the very least, all mental facts are naturally or nomologically strongly supervenient on contingent, fundamentally physical facts. That is: certain causally inert or epiphenomenal facts about the human mind—for example, facts about the normative character of rational human intentionality, or about the qualitative specific character of consciousness—vary independently of contingent, fundamentally physical facts, even though all of the human mind’s causally efficacious properties or facts are still wholly constitutively determined by fundamentally physical facts.¹

Step 3. By the thesis of *universal natural mechanism*, I mean the doctrine which says (i) that everything in the world either just is or is a sub-part of natural or physical processes that are either deterministic, indeterministic, or some mixture of both (say, macroscopically deterministic but microscopically indeterministic at the quantum level), and (ii) that all the causal and quantitative characteristics of those happenings are not only (ii.a) strictly fixed by the general causal laws of nature and/or the mathematical laws of probability, especially those laws governing the conservation of quantities of matter or energy, together with all the settled facts about the past, especially including The Big Bang, but

¹ For canonical discussions of the varieties of materialism or physicalism about the mind-body relation and mental causation, see (Kim, 2005, 2006).

also (ii.b) calculable from those laws and facts on a Turing machine, i.e. a digital computer (see, e.g., Boolos and Jeffrey, 1989).

In turn, the thesis of universal natural mechanism properly belongs to a larger conception I call *the mechanistic worldview*, which says that

everything in the world is fundamentally either a formal automaton or a natural automaton, operating strictly according to Turing-computable algorithms and/or time-reversible or time-symmetric deterministic or indeterministic laws of nature, especially the Conservation Laws (including the First Law of Thermodynamics) and the Second Law of Thermodynamics, which also imposes always-increasing entropy—i.e., the always-increasing unavailability of any system’s thermal energy for conversion into causal (aka “mechanical”) action or work—on all natural mechanisms, until a total equilibrium state of the natural universe is finally reached (see also Hanna and Paans, 2020).

Step 4. *Neither materialism or physicalism, whether reductive or non-reductive, nor the mechanistic worldview, can explain or justify logic, mathematics, or even natural science itself, because materialism or physicalism says that everything is ultimately grounded on contingent, fundamentally physical facts known only a posteriori, and also because the mechanistic worldview says that everything in the world works according to Turing-computable algorithms, whereas logic, mathematics, and even natural science all include not only (i) many irreducibly necessary facts known only a priori about truth, falsity, logical connectives, logical operations, logical consistency and inconsistency, logical validity, logical soundness, logical proofs, numbers, other mathematical objects, mathematical operations, mathematical laws, mathematical proofs, the non-mechanical causal powers and operations of living organisms, and the non-mechanistic laws of nature that govern those causal powers and operations (Hanna, 2015, [2024a]), but also (ii) many irreducibly uncomputable functions applying to truth, falsity, logical connectives, logical operations, logical consistency and inconsistency, logical validity, logical soundness, logical proofs, numbers, other mathematical objects, mathematical operations, mathematical laws, mathematical proofs, the non-mechanical causal powers and operations of living organisms, and the non-mechanistic laws of nature that govern those causal powers and operations (Torday, Miller Jr, and Hanna, 2020; Hanna, [2024a]).*

Step 5. Any attempt to explain the nature of consciousness or justify a theory of consciousness must presuppose and use *our manifestly real non-materialistic or non-physicalistic, non-mechanical, and more specifically uncomputable innate capacity for human rationality* (Hanna, [2024a: esp. chs. 2 and 16]), which in turn necessarily includes *our manifestly real non-materialistic or non-physicalistic, non-mechanical, and more specifically uncomputable innate sub-capacity for consciousness-of* not only (i) all irreducibly necessary facts known only a priori about truth, falsity, logical connectives, logical operations, logical consistency and inconsistency, logical validity, logical soundness, numbers, other

mathematical objects, mathematical operations, mathematical laws, mathematical proofs, the causal powers and operations of living organisms, and the laws of nature that govern those causal powers and operations (Hanna, 2015, [2024a]), but also (ii) many irreducibly uncomputable functions applying to truth, falsity, logical connectives, logical operations, logical consistency and inconsistency, logical validity, logical soundness, logical proofs, numbers, other mathematical objects, mathematical operations, mathematical laws, mathematical proofs, the causal powers and operations of living organisms, and the laws of nature that govern those causal powers and operations (Torday, Miller Jr, and Hanna, 2020; Hanna, [2024a]). For example, insofar as you read and understand logic texts, mathematics texts, physics texts, biology texts, chemistry texts, and so-on through all the formal and natural sciences, or philosophy texts—including this very one—then you *consciously* read and understand them.

Above all, in order to be able to write any legible text in *cognitive neuroscience*, we must already presuppose and use our manifestly real non-materialistic or non-physicalistic, non-mechanistic, and more specifically uncomputable innate capacity *to read and understand that text consciously* (Hanna, [2024b]).

Step 6. Therefore, any and every attempt to explain consciousness or justify a theory of consciousness must already presuppose and use our manifestly real non-materialistic or non-physicalistic, non-mechanistic, and more specifically uncomputable innate capacity for consciousness. Or in other words: *the psychocentric predicament*.

Step 7. Given the psychocentric predicament, any and every materialist or physicalist, naturally mechanistic, or otherwise reductive (e.g., computational or informational) science of consciousness whatsoever must already presuppose and use *that which is the exact denial of what it's attempting to prove*, and therefore any and every such science is self-refuting. Or in other words: any and every hard science of consciousness is impossible. QED (Hanna, 2023: pp. 4-8)

Therefore, throughout his philosophical lifetime, Dennett publicly presented and defended a *false* doctrine. Correspondingly, with Dennett's death, we're now in a position to proclaim publicly *the end of materialism or physicalism as a serious philosophical doctrine*. Only a *liberal naturalist* doctrine, which affirms that mental properties are at least as fundamental in the natural universe as mechanical, physical properties, is philosophically acceptable. Liberal naturalist doctrines include not only various versions of idealism and panpsychism, but also the doctrine I favor, *the essential embodiment theory*, which says (i) that physically irreducible minds like ours are necessarily and completely embodied, (ii) that physically irreducible minds like ours are complex dynamic global structures of our living organismic bodies, i.e., forms of life, (iii) that physically irreducible minds like ours are therefore inherently alive, (iv) that physically irreducible minds like ours are therefore also inherently causally efficacious, just like all forms of

organismic life, and (v) that physically irreducible minds like ours emerge over time and in space in all and only certain kinds of living organisms (Hanna and Maiese, 2009; Hanna, 2011; Hanna, 2024a).

I won't argue explicitly for the essential embodiment theory here, but only note that according to me, the mental-physical relation in minded living organisms like us is nothing more and nothing less than (i) a synthetic a priori two-way necessary complementarity relation, and also (ii) a neo-Aristotelian hylomorphic relation, that is, a mental-to-physical and also physical-to-mental entangled necessary equivalence of "fused" inherently activating irreducible formal or morphetic mental properties on the one hand, and complex non-equilibrium thermodynamic material or hyletic biological physical properties on the other, such that, (iii) as minded animals, i.e., as conscious living organismic animal bodies, we're an indissoluble and physically irreducible form-matter composite, by virtue of which we're always "minding our bodies" (Hanna, 2011), that's (iv) inherently poised for causally efficacious intentional action, spontaneously initiated and creatively guided by our synchronous acts of desire-based willing (Hanna, 2020). In short, *our minds are physically irreducible forms of animal life and we're essentially embodied minds in action*. This doctrine in turn, has significant parallels with Gilbert Ryle's view of the nature of mind in *The Concept of Mind* (Ryle, 1949); and it's therefore ironic that Ryle was Dennett's BPhil and DPhil advisor at Oxford and also that Dennett profoundly mistakenly read Ryle as a materialist or physicalist of the behaviorist variety.

In another ironic confirmation of my argument, some mainstream contemporary Analytic philosophers working in the "experimental philosophy" tradition published an article during 2023 in which they described using ChatGPT-3 to create a fairly successful digital replica of Dennett (Strasser, Schwitzgebel, and Crosby, 2023). This is in fact *doubly* ironic, since (i) in 2006 Dennett himself published a critical article in which he argued cogently that much of what is published by Analytic philosophers in mainstream ranked, respectable professional philosophy journals is nothing but moves being made in an essentially chess-like (hence Turing-computable, hence chatbotable) and trivial a priori philosophical language game, "higher-order truths about chess" (Dennett, 2006), and (ii) in 2013, Dennett remarked in an interview that everyone needs to face up to the scientific a priori truth that we're nothing but "moist robots" (Schuessler, 2013). No doubt, by the time that ChatGPT-5 or ChatGPT-6 is rolled out, Dennett's corpus of writings will have been *fully* successfully digitally replicated by a not-so-moist *RoboDennett*, a virtually undefeatable Grand Master of the special brand of scientific higher-order chess practiced by Dennett himself. So Dennett the minded human animal is dead; but long live RoboDennett, a forthcoming digital replicant in an online carnival sideshow commemorating materialism's or physicalism's descent into the ash-heap of history.

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