This is not to say that Papineau doesn't have answers to the questions raised by this balancing act, but rather to point out that, while Papineau is fast to highlight the metaphysical strangeness of representationalism and other accounts of sensory experience, his own view is strange, too. The fact that there is so much strangeness all around just illustrates where Papineau's book succeeds: we do need to look more closely at the metaphysical coherence of our accounts of sensory experience. Papineau mounts a sustained challenge throughout the book to those working on sensory experience to attend more closely to the metaphysical implications of their views, showing why the metaphysical issues, often overlooked or assumed, matter, and the care with which he unpacks the metaphysical implications of his own view sets a strong example for others to follow.

Acknowledgments

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Anil Seth
Being You: A New Science of Consciousness
London: Faber & Faber, 2021, 368 pp.
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Reviewed by Alex Gomez-Marin
Instituto de Neurociencias (CSIC-UMH)
Alicante, Spain
agomezmarin@gmail.com

Consciousness has been the province of poets, priests, and philosophers for centuries. Nowadays it is a subject of scientific study, capturing the imagination of laypeople, attracting funding, and selling non-fiction books. Neuroscientists are in a privileged position to study the conscious mind — and to be baffled by it. After all, the human

brain is the most complex piece of matter we know of, and its intimate relationship with subjective experience is as patent as mysterious.

In his recent book, *Being You: A New Science of Consciousness*, computational and cognitive neuroscientist Anil Seth joins the list of academic celebrities determined to make progress on mind matters. With a lucid and sharp writing style, Seth paints a colourful landscape of interrelated topics, all fascinating and important.

The two main arguments of the book are summarized with catchy slogans. First, Seth claims that 'your brain hallucinates your conscious reality'. Second, he pledges that the so-called hard problem of consciousness will dissolve as we concentrate on what he calls 'the real problem'. He argues that we have taken our perception of the world too literally and the problem of consciousness too mystifyingly. *Being You* weaves these ideas together, accessible to the layperson and a must-read for the expert.

Let us briefly deal with perception, and then devote the remainder to consciousness.

Based on von Helmholtz's idea of perception as inference, Seth presents a predictive processing account of cognition, arguing that perception is a 'controlled hallucination'. By 'hallucination' he means that the contents of perception are not a direct read-out of a mind-independent reality. Seth implies that there is an objective world 'out there' but emphasizes that everything we perceive is actively constructed. Noisy signals from sensory organs are woven with our brain's expectations, generating a best guess about their present and future causes. That hallucinations are 'controlled' is key. Even if not veridical, they are useful to navigate the world presented through a veil of handy illusions.

Amusingly, brains would do what brain scientists studying them do: to advance hypotheses about the world, test them, and then update their beliefs — a sweetly refined anthropomorphic idea that enacts a kind of cerebral phenomenology whereby one wonders what it is like to be a brain, alone, in the dark, locked inside the skull. For Seth, the doors of perception are walled. He favours a simulation headset over a translucent window. Furthermore, nothing in the world is actually red (red is only in your head).

Such an ambitious project risks becoming another theory-of-everything erected on clickbait metaphors metastasizing into covert metaphysics. Seth seems comfortable blurring the line between instrumental and ontological interpretations: 'the brain *is* a "prediction machine", and that what we see, hear, and feel is *nothing more than*

the brain's "best guess" of the causes of its sensory inputs' (*my italics*). The pseudo-philosophical temptation to surreptitiously swap 'as' with 'is' easily leads to what Iain McGilchrist calls 'The School of Nothing Buttery'.

Seth indeed extends the explanatory scope of his framework to '*every* aspect of our perceptual experience'. Not only your perception of coffee cups is a controlled hallucination but also every way of 'being you', including being a self and being conscious. Interestingly, the self would not do the perceiving but be another perception (*preadico, ergo sum*). The idea of error minimization becomes a kind of cybernetic Bayesian ontology. The key concept of allostasis is spread like butter on the bread of mentality.

Now to consider consciousness.

Seth provides a wide perspective on the current state and prospects of the mainstream scientific study of consciousness. His own scientific contributions are a blessing to the field. And yet I am afraid that, if *Being You* is not just about perception but also about consciousness, it certainly does not usher *A New Science of Consciousness*, as the subtitle promises.

Let us go back to 'the hard problem', David Chalmers' modern rebranding of the classic mind–body problem: 'Why should physical processing *give rise* to a rich inner life at all? It seems objectively unreasonable that it should, and yet *it does*' (*my italics*). But does it? Isn't the conclusion in the premise? If one listens carefully, the question affirms the materialistic position, challenging it in a way that keeps it intact. When one takes for granted that brains *produce* consciousness, metaphysical commitments and scientific facts coalesce, if not collude. In fact, for most neuroscientists, *whatever* consciousness is, it must *somehow* emerge *somewhere* in the brain. The position is so partisan that it seems impossible to ask *whether*; the only question is *how*. Neurospresso's brainsplaining: *What else?*

The essential debate about the *precise* relationship between thoughts and brains (solidarity versus equivalence, participation versus interaction, etc.) has faded. But one can revisit Henri Bergson to find a lucid dose of common sense: 'That there is a close connection between a state of consciousness and the brain we do not dispute. But there is also a close connection between a coat and the nail on which it hangs, for, if the nail is pulled out, the coat falls to the ground. Shall we say, then, that the shape of the nail gives us the shape of the coat, or in any way corresponds to it?' What do brain data really show? The edifice of twenty-first-century consciousness neuroscience stands on

the foundations of the following candid empirical fact: 'change the brain, experience changes.' The hard problem of wardrobes is to explain why and how hangers give rise to clothes.

Nevertheless, Chalmers' formulation is interesting in that it exposes the ill-posed nature of the physicalist programme. In fact, 'hard' is rather generous. For devoted materialists, the 'problem' is almost certainly impossible to solve. And yet, paradoxically, the adherence to naturalism that supposedly comes with materialism forces their promoters to postulate consciousness as scientifically tractable, if not *de facto*, at least *de jure*. But, how can what is defined as mindless accommodate mind, let alone give rise to it? When it comes to experience, emergence (weak, strong, or desperate) endures a big free miracle.

Of course, many disagree. Seth insists that Chalmers' hard problem is a distraction from the real one which, according to the neuroscientist, consists in explaining, predicting, and controlling the properties of subjective experience *in terms of* neural and bodily mechanisms. Deploying the standard filler verbs ('depends on', 'relates to', 'is the basis of'), abstractions are given primacy over lived experience, railroading matter or information (as *explanans*) over mental features (as *explanandum*).

In an attempt to find a middle way between 'the easy' and 'the hard' problems, Seth points to phenomenological properties of consciousness, rather than just functional or behavioural aspects. His phenomenology is nevertheless ambivalent. On the one hand, 'our conscious experience is *all there is*'. On the other hand, he gives primacy to mechanistic reductions of experience, emphasizing the divide between how things seem and how they really are. Seth does not neglect subjectivity, but he reifies and scatters it into a phenomenological inventory. In the light of Edmund Husserl's radical phenomenology, or the scientific programme of neurophenomenology, Seth's looks jejune. He uses phenomenology without adopting its standpoint.

This is his gambit: 'The ambition of the real problem approach is that as we build ever sturdier explanatory bridges from physical to phenomenological, the hard-problem intuition that consciousness can never be understood in physical terms will fade away, *eventually vanishing in a puff of metaphysical smoke*. When it does, we will have in our hands a satisfactory and fully satisfying science of conscious experience' (*my italics*). Commuting between science and philosophy without admitting it or realizing it, Seth gives the impression that the latter is irrelevant. And yet, paraphrasing John Maynard Keynes:

practical scientists, who believe themselves to be quite exempt from metaphysics, are usually the slaves of some defunct philosopher.

Seth's cautionary notes on 'conceivability arguments' as weak philosophical games are pertinent. He puts forth a 'promisability argument' instead. His exemplary optimism is understandable but historically facile and philosophically naïve: we can because we will, and we will because we already have (as with life, so with mind). His real problem 'goes after the hard problem indirectly, but it still goes after it'. He does not pretend to solve it upfront (à la Tononi), nor to dissolve it upfront (à la Varela), but to dissolve it in the end, transmuting the magic dust of consciousness into the promissory sand of materialism.

In my view, Seth's formulation is a distraction from the foundational blind spot of the materialist worldview: lived experience. But rather than stepping back to reappraise the question (and revise one's presuppositions), he kicks the answer forward.

The 'explanatory gap' is turned into an 'explanatory nap' by means of an 'explanatory rap', rescheduling the grand finale as many times as needed while making 'progress' with a series of mechanistic blows. Getting busy with a pragmatic piecemeal approach one hopes the ill-posed nature of the endeavour will evaporate. The plan is to chip the problem away, killing it softly with one's work — a patient and long detour to cash up promissory notes, whose credit stems from swapping the word 'unsolvable' for 'unsolved'. It is just a matter of time (and data, and technology, and funding) before any obstacle shall ultimately be dispelled, or else deemed irrelevant. Hard work and faith in what the future will bring is the essence of the neuro-soteriology at play. What else could be done?

However, recasting spooky Mysteries into toilsome Wordles entails a kind of humble hubris whereby one confesses that we *don't* know but simultaneously professes that we *will* know. Enlightenment? Always tomorrow: 'we now know' that we will look back in a hundred years and say 'we now know'. In the meantime, prominent academics make grand bets on wine bottles; that's their skin in the game.

But, what else have we got? Isn't physicalism the only game in town? Seth casually contends that all alternatives are doomed. Here is a short list. First, one presents a two-alternative forced-choice between materialism and dualism, stuck between thesis and antithesis. Second, when it comes to panpsychism, it is not even wrong. Seth has no patience for anything quantum either. Similarly, by presenting the

dilemma between consciousness as being more like life or more like temperature, he risks spoiling his savvy explication of integrated information theory by strawmanning it. Finally, the neuro-sophism is completed by insinuating that anything that does not fit within science-as-we-know-it is 'spooky', 'magical', or 'supernatural'.

The back cover of the book announces that Seth 'puts forward a radical new theory of consciousness'. Unfortunately, in my estimation, it is not radical nor new (physicalism redux), and probably not even a theory ('predictive processing' is a framework for cognition).

Future takes on the nature of consciousness will probably continue to oscillate between an epiphenomenal illusion and a fundamental reality. Nonetheless, its study is a singular opportunity to go beyond the frontiers of knowledge. Science has thrived for centuries precisely because of its setting aside quality, value, and purpose. But if it remains an exclusively third-person approach, a new science of consciousness seems unworkable, and science itself is likely to stagnate. Let us ask what science can do for consciousness, but also what consciousness can do for science. The so-called 'altered' states of consciousness provide a fertile ground of enquiry, from psychedelic and contemplative states to dreaming and near-death experiences.

In summary, like other distinguished scientists before (thinking specifically of Crick and Koch's 'neural correlates of consciousness'), Seth's adamant programme may be theoretically flawed and still empirically fruitful, animating the field of consciousness research without getting us much closer to an understanding of the place of consciousness in nature. It is instructive to recall Feynman's injunction to 'search more diligently, and with the greatest effort, in exactly those places where it seems most likely that we can prove… ourselves wrong as quickly as possible, because only in that way we may find progress'. Is this the kind of progress we are after? Are we trying to prove ourselves wrong as slowly as possible? Is good-old-fashioned physicalism on virtual reality goggles our best guess to address consciousness scientifically?

In the *Epilogue* Seth uses a telling metaphor: 'the science of consciousness isn't about choosing from a set menu, however swanky the restaurant or skilled the chef. It's more like cooking with whatever you can find in the fridge.' But let me ask: what if, in trying to solve 'the hard problem of dinner', we need to cook a *tortilla* and we have eggs but no potatoes? Should we convince ourselves that all we really wanted was a French *omelette*? Or should we go beyond the familiarity of our own fridge, seek for missing ingredients, and be

honest about what we can and cannot deliver. Indeed, some 5-star Michelin neuro-restaurants excel at maintaining a tightly controlled hallucination that consists in convincing everyone that by boiling eggs long enough they will eventually turn into potatoes. That's 'the real problem' *of materialism*.

Luke Roelofs
Combining Minds: How to Think about Composite Subjectivity
Oxford: Oxford University Press, 2019
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Reviewed by Joanna Leidenhag
University of Leeds

Luke Roelofs' *Combining Minds* is one of the most ambitious and exciting books on philosophy of mind I have read. Roelofs' goal is to challenge an almost universal orthodoxy in western philosophy of mind: anti-combinationism, the intuition that two subjects cannot become one and one subject cannot be made up of many composite subjectivities. Roelofs tackles anti-combination at multiple levels of scale: he considers electron-sized subjects combining to form a unified larger subject, describes brains as combinations of hemisphere-subjects (or other brain regions), and uses science-fiction thought experiments to imagine how social groups might form a unified single consciousness. Whether for philosophers committed to anti-combination as a premise on which to build arguments, or scholars who desire to articulate some form of mental combination, Roelofs' arguments are clear and worth engaging.

The structure of the book works on two levels with four Divisions, each divided into two Chapters, designed to overcome what Roelofs takes to be the two main obstacles facing combinationism. Division 1 (Chapters 1 and 2) provides a lucid overview of the current literature, definition of key terms, and an outline of Roelofs' argument, with particular attention to recent claims for and against panpsychism (defined as the 'the view that consciousness Is omnipresent among the fundamental things of the universe: all matter Is conscious'; p. 14). These first two chapters lay an invaluable foundation for later constructive developments.

The first obstacle is that the key terms under discussion are slippery, and interlocutors can unintentionally move the goalposts by pivoting