London Review of Books

What are trees about?

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Incomplete Nature: How Mind Emerged from Matter by Terrence Deacon

Full disclosure: after a while, I began to skip. After a while longer, I began to skip a lot. That was reprehensible, but passages like: ‘but then a teleogenic process in which one critical dynamical component is a representational process that interprets its own teledynamic tendency extends this convoluted causal circularity one level further’ started to get me down; as Deacon quite correctly remarks, ‘life and health are fragile.’ Also, I came to suspect that, when the terminology got to be heavy-going, that often masked the begging of questions that Deacon was most keen to answer. Some examples to follow.

The book starts well enough. Deacon worries (as many have before him) that some characteristics of mental phenomena are hard – perhaps impossible – to accommodate within the broadly naturalistic consensus that civilised persons increasingly take for granted: the world consists, at a minimum, of lots and lots of middle-sized objects (tables and chairs, you and me) together with their smaller parts. These interact causally in accordance with natural laws in ways that the material sciences have explored with some success. The history of the world is the totality of such interactions. Many perplexing phenomena that once seemed to be intractable to naturalistic explanation have proved, on closer examination, not to be so. It turns out that there aren’t any ghosts, or angels, or entelechies; there aren’t even any vital forces. (Perhaps there are abstract objects, numbers and sets, for example, but they are causally inert.) It seems that the natural world is all there is. This is, to be sure, pretty imprecise; but, as far as it goes, it has proved to be remarkably reliable.

But, until now at least, three notable properties of minds have evaded the naturalistic consensus: mental states and processes are often teleological (they have goals and functions); they are often (perhaps always) conscious; and they are often intensional. (You may wonder why philosophers sometimes spell ‘intentional’ with a t and sometimes with an s; and why Deacon feels compelled to compound the homonymy with the neologistic ‘ententional’. But
it is better not to ask.) Deacon’s book is about the way consciousness, intensionality and
teleology might be brought within the compass of naturalism. But, characteristically, he
doesn’t tell us much that’s detailed about what he takes any of them to amount to. In
consequence, it isn’t at all clear exactly what he thinks robust theories of intensionality,
consciousness or teleology would be required to explain.

However, just for purposes of orientation: the worry about the ‘intensionality’ of beliefs,
thoughts and the like is that they are about things. George Washington slept here is about
George Washington (or maybe it’s about where George Washington slept). By contrast,
nothing outside the realm of the mental appears to be about anything; not trees, or rocks, or
you and me. (Trees cause shadows, but they aren’t about the shadows they cause, nor are
their shadows about the trees that caused them. A tree’s rings indicate the tree’s age, but they
aren’t about the tree’s age. Symbols are about things, but they don’t count because they are
themselves the products of mentation.) Similarly, the substitution of coextensive terms is
generally logically valid outside modal contexts (‘perhaps’, ‘necessarily’ etc) but it isn’t within
the scope of intensional verbs. What is it about believing, desiring etc that accounts for these
logical peculiarities?

The worry about teleology is that ‘final’ causes appear to contradict the natural order of cause
and effect. (The monkey’s having a paw precedes his using it to scratch his ear; but the
teleological intuition is that, somehow, it’s the convenience of the paw for scratching that
accounts for the monkey’s having it.) The worry about consciousness is that, in Thomas
Nagel’s resonant phrase, there is ‘something that it’s like’ to be a conscious creature, but there
is, presumably, nothing that it’s like to be a tree; and there is surely nothing that it’s like to be
a rock or anything else that is material.

So then, sketchy though the naturalist programme doubtless is, the question arises how to
accommodate intensionality, consciousness and teleology in the natural order. And Deacon is
perfectly right to say that, in each case, the answer is pretty much a mystery. The question,
however, is whether it’s the same mystery in all three cases. Deacon clearly thinks so, but it’s
less clear what he takes the unifying thread to be. The eponymous theme of Incomplete
Nature, if I read it right, is that, in each case, ‘ententional’ explanations must appeal to things
that aren’t there. We’re told that since ‘all ententional phenomena are intrinsically organised
with respect to some property or state of affairs that does not currently exist, it is unclear
from [a] simple materialistic perspective how these absent features could have causal
influence’. It’s not obvious, however, that this diagnosis fits all three of the cases that worry
Deacon. No doubt, it’s a puzzle how mechanisms could be causally explained by their
functions; but then, perhaps functional explanations aren’t causal. And it’s plausible enough
that, insofar as George Washington belongs to the content of ‘George Washington slept here, he
does so, as it were, only in absentia. But what, one wonders, might consciousness be the
absence of? Search me. According to Deacon, unlike ‘individual neural signals ... morphodynamic regularities of activity patterns within a large neural network ... are produced by the incremental compounding of constraints as they are recirculated continuously within the network.’ I don’t claim to understand that; but, whatever exactly it means, I don’t see how it could explain the felt character of conscious experience; or the aboutness-relation between thoughts and things in the world, or the way final causes manage to precede their putative effects. This is the sort of passage in which Deacon’s technical vocabulary seems to obscure the issues he intends it to illuminate.

Notice, too, that there is more than a whiff of circularity. Consciousness and teleology both have intensional objects; consciousness is always of something or other; and functional mechanisms are, ipso facto, supposed to do something or other. So, short of question-begging, an account of consciousness or teleology can’t merely presuppose an account of intensionality. Maybe Deacon has one of those up his sleeve; but if he does, I don’t know what it is. At one point, he remarks that ‘the extent of [the] work and the intensity of the tension created by the resistance of dynamical processes to rapid change is, I submit, experienced as the intensity of emotion.’ But ‘experienced as’ is itself intensional (the extent of the work and the resistance to change are experienced not as the extent of the work or the resistance to change but as the ‘intensity of emotion’); and, anyhow, the problem about consciousness is precisely how anything can be ‘experienced as’ anything at all.

There is, to be sure, ‘something missing’ in the usual accounts of intensional processes, both inside and outside neuroscience. For example, explanations in computational psychology are widely considered as alternatives to neurological explanations, but Deacon is right to say that computations, in and of themselves, lack reference and intensional (or ‘ententional’) content. He may also be right to claim that is because, lacking an interpreter, computation is a merely mechanical process. If so, that is an impressive argument that aboutness doesn’t reduce to mechanism, neural or otherwise. Philosophers (Donald Davidson, for example) have taken that line from time to time. But maybe the reason computations per se lack aboutness and other such semantic properties isn’t the want of an interpreter. It’s been widely suggested, over the last several decades, that the aboutness of the mental is intrinsically involved with its causal relations to the things in the world that it refers to and thinks about (which computations as such don’t have). Computers can’t think about the weather; but maybe a robot could if a computer were properly embedded in the robot and the robot properly embedded in the world. If so, wouldn’t that count as explaining how the intensional can fall within the purview of the natural? What more could a civilised materialist require? Deacon doesn’t develop that sort of approach to the metaphysics of the mental; but it seems to me he should.

In any case, if absence is one of the strings to Deacon’s bow, ‘emergence’ is the other. The
idea is that, somehow, complex processes (including complex neural and computational processes) have properties that are not reducible to those of their less complex components. According to Deacon, consciousness, intensionality and teleology are instances of this kind. Now, as he is quite aware, emergentism is by no means a new approach to the ontology of mind. It has, however, a number of problems that Deacon doesn’t much attend to and that might well be considered lethal (and, these days, generally are). For one thing, whether emergent properties of wholes reduce to properties of their constituents depends very much on what ‘reduce’, ‘property’ and ‘constituent’ are taken to mean. Of course the army may overrun the country though none of the individual soldiers can. But so what? In what sense would it follow that the army can do anything ‘over and above’ (as emergentists like to put it) the sum of what the individual soldiers do? And wouldn’t it be a sort of miracle if the causal powers of armies didn’t ‘reduce’ to the causal powers of the soldiers? The army doesn’t emerge from the soldiers; the army is the soldiers; only it’s the soldiers ‘taken together’. I strongly suspect that Deacon frequently confuses strictly emergent phenomena (if there are such things) with merely statistical properties of aggregates. Still worse, emergentism leads, perhaps inevitably, to epiphenomenalism. If mental states and processes are merely emergents from the neural states and processes that are the honest to God causes, how do one’s beliefs, desires and the like manage to be the cause of one’s behaviour? The metaphysical and epistemological issues in this part of the wood are by no means trivial; but they really mustn’t be glossed over. It’s no accident that philosophy takes such a long time.

In general, epistemological and metaphysical issues tend to be matters of some delicacy. It’s almost always a mistake to call in the heavy artillery right at the start. Consciousness, intensionality and teleology are, after all, things that happen routinely at the macrolevel (and, quite possibly, nowhere else). It’s hard to believe that saying what they are and how they happen requires lots of heavy-duty stuff about thermodynamic equilibria, neural attractors, morphodynamic activity, self-organising systems or, heaven help us, the quantum mechanical collapse of probability waves; nothing Deacon says explains why it should. What one longs for, but doesn’t get, are the circumstantial details that, in Pooh-Bah’s words, ‘give artistic verisimilitude to an otherwise bald and unconvincing narrative’. For just one instance: quite a lot has been discovered of late about consciousness and, in particular, its surprisingly intimate relation to attention (cf the experimental literature on ‘change blindness’). It would have been nice if Deacon had tried to account for these findings with some of his stuff about a ‘teleodynamics that emerges from a teleodynamic process that must include itself as a component: a teleodynamic circularity in which the very locus of teleodynamic closure becomes virtual’; but, regrettablely, that sort of thing doesn’t happen in this book (or, if it does, it must be in one of the parts I skipped).