Leibniz's Mill: A Challenge to Materialism. By Charles Landesman. Pp. 182, Notre Dame, Indiana, University of Notre Dame Press, 2011, \$30.00.

A claim often found in philosophy of mind textbooks is that dualism (i.e. substance dualism, or Cartesian dualism) has long since fallen out of favour, and can boast little to no credible contemporary support. Such claims are of course mistaken, as is shown by the many examples of present-day philosophers who throw their lot in with dualism. Charles Landesman is one such, and in Leibniz's Mill he offers both a defence of the theory and an attack on rival materialist philosophies of mind.

The book's first chapter details the Cartesian roots of Landesman's dualism and the argument with which he seeks to defend it, an argument often referred to as 'Leibniz's mill' (which can be found in a number of Leibniz's works, most famously in §17 of the 'Monadology'). In this argument, Leibniz has us suppose that the human brain has been enlarged to the point where we are able to stroll around it and inspect its materials and workings as we could with a mill. What would we see? Leibniz says: shapes and motions, and various mechanical processes such as parts pushing other parts, but nothing that would explain thought or perception. Landesman agrees, claiming that even if the argument were to be modified to bring it into line with current understanding of brain architecture (so that we would see neurons discharging rather than parts pushing other parts) it still points to the conclusion that thought is not material. After considering and rejecting a number of possible objections, Landesman avers that there has never been 'a successful refutation of the argument illustrated by Leibniz's mill' (p. 28). There are debates amongst historians of philosophy as to how exactly Leibniz's mill argument is supposed to work, or even whether it is amounts to an argument at all. However in his (rather brief) presentation of the argument, Landesman does not discuss or even mention these debates, or the problems of interpretation that underlie them, which is perhaps understandable: although he does more than just touch on the history of philosophy in this book (in addition to Leibniz, there are lengthy discussions of the work of Descartes, Locke, Reid and others), his approach is to treat this history as a resource to be mined rather than one to be mastered. Less understandable, however, is Landesman's confidence that the mill argument unequivocally points away from materialism towards the existence of a non-material mind: he very clearly takes the argument to reveal something about the world, namely that thought is not a physical thing, whereas a more sober reading of it has it revealing something about us, namely that we cannot grasp how thought could be a physical phenomenon (or, to put it in Colin McGinn's terms, we do not have the right cognitive equipment to grasp how the brain causes consciousness).

Although it is unfortunate that Landesman does not put his chief argument for dualism on a firmer footing, this does not cast too long a shadow over the rest of his book, as the remaining four chapters can be read as standalone pieces in their own right given that each is concerned with a different topic central in contemporary philosophy of mind. In chapter 2, Landesman considers the problem of other minds, and considers two possible solutions: the first is inductivist in nature (generalizing from one's own case), and the second is based on Reid's theory of natural signs (which holds that our beliefs about the

thoughts and minds of others are created by our natural constitution which leads us to interpret gestures and facial expressions as 'signs' of mental activity). In chapter 3, Landesman examines and resists attempts (by Hume, Buddha, and William James) to do away with the idea of a substantial self, and then considers the issue of personal identity. Landesman's position here is that our everyday ways of ascribing personal identity recognise the existence of certain 'internal' features, such as memory, which presuppose a substantial self, and thus support the Cartesian theory of the mind. Chapter 4 concerns perceptual consciousness, and here Landesman argues that qualities such as colour that we take to be part of the world outside us, are in fact not so, but are instead very much first person phenomena, and so only accessible introspectively. This position is, he claims, 'consistent with the argument of Leibniz's mill' (p. 140). The fifth and final chapter concerns agency; here Landesman sets out to expose fundamental problems with the compatibilist account of free will; in its place he recommends a libertarian account, largely because it is perceived to be a better fit with our own personal experience of decision-making.

As should be clear from this potted account, Landesman here covers a lot of philosophical ground in a relatively short space (less than 200 pages). Perhaps because of this, the discussion is sometimes lacking in philosophical depth, but is always engaging nonetheless. Yet how the five chapters amount to a 'challenge to materialism' is never made clear. In fact parts of this book are hard to see as furthering a dualist/anti-materialist cause, e.g. the two responses Landesman gives to the problem of other minds, neither of which seems to be exclusively open to dualists, both being perfectly consistent with materialist philosophies of mind. Nevertheless there does seem to be a recurring theme of the book, which is often present more as an undercurrent than as an explicit thesis: it is that science is not inherently materialistic or naturalistic at all, and does not (contrary to the beliefs of many philosophers) entail either a materialistic theory of the mind, or associated doctrines such as compatibilism, etc. It is possible, then, to see Landesman's book as a subtle philosophical corrective to what he sees as incorrect interpretations of science by philosophers (past and present). Those who harbour similar concerns will find much here of value.

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