Booknotes

Philosophy of science has, in recent years, tended to leave to scientists questions to do with the nature of the world, and at most to interpret the theories scientists produce, or, somewhat unavailingly to try to explain their logic and rationale. Philosophers have, in some ways wisely, shied away from what might be called natural philosophy – the business of actually producing pictures and descriptions of how the world actually is. But maybe this self-denying ordinance has been too restrictive, allowing scientists free reign over questions which belong to the hinterland between philosophy and science. This division of labour has permitted scientists indulgence in metaphysical extravagance – postulating multiverses, undetectable and hitherto undreamt forms of matter (or anti-matter), ever more baroque types of force and particle, and the like.

So it is refreshing to see a philosopher and a physicist take on some of the biggest issues in science and philosophy today, and in so doing to attempt to overturn some of the most sacred of science's sacred cows. The philosopher is Roberto Mangabeira Unger and the physicist is Lee Smolin; their book is *The Singular Universe and the Reality of Time* (Cambridge University Press, 2015), and the fact that it is a joint effort (though with some elements of disagreement) may stave off claims of philosophical arrogance. The title itself gives more than a clue to the book's central theme, which will probably hearten those who take a marine-like commonsensical attitude to these matters.

Underlying the authors' defence of the reality of time is an interesting exploration of causality (which may well have found a degree of favour with Elizabeth Anscombe). In their view we can speak of causal interaction without having to postulate universal laws of constant conjunction and the like. Causality is, in that sense, primitive and does not depend on underlying regularities. Not only that, laws of nature may not be universal, in the sense that there may be (and probably are) moments in the history of the universe when some causal intervention upends previous regularities and institutes new ones. So, what the authors see as the reality of time also undercuts the idea that there are causal and scientific laws which obtain at all times and all places. Time is real, and happenings in time change things, including 'laws of nature'. Interestingly they suggest that biology, or the type of development we see in biology, has as

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much claim to give us insight into the basic nature of the universe as do the apparently unchangeable, timeless and reductive processes postulated by physics; and, underlying the whole treatment is a view of mathematics as a tool useful in its way, and for specific purposes, but no more than that.

Even this brief and inadequate outline of the themes of a very long (and actually somewhat repetitive) book may show its philosophical interest. For philosophical readers, perhaps more than the interest and even the validity of the book's central claims is fact that, though, they are defended with some considerable scientific knowledge and aplomb, they are largely argued for philosophically. So could this book presage a revival of natural philosophy in the seventeenth- and eighteenth-century sense?

It is a big jump from considering the universe as a whole (this one universe as one whole), as Unger and Smolin urge, to considering what one person thought about one thing, but this is what Bela Szabados attempts in *Wittgenstein as Philosophical Tone-Poet: Philosophy and Music in Dialogue* (Amsterdam, New York: Rodopi 2014). But the one person is Wittgenstein, and certainly for Wittgenstein, music was a significant part of this world, perhaps a world, or a number of worlds in itself. The significance of music for Wittgenstein is clear; he was passionate about it, and said passionate things about it. The problem is that what he said, or what we know of what he said, often seems, as Michael Tanner has it, to be 'of questionable value'. Some of it indeed can just seem crass, as when in criticising Mendelssohn, Wittgenstein says that within all great art 'there is a WILD animal tamed'. Bach? Botticelli? Phidias? Jane Austen? Just to consider cases here raises questions about the meaning of the judgement, let alone its validity. The master would not have allowed philosophers to get away with such loose talk.

Szabados does about as good a job as could be done with what Wittgenstein said, and he certainly gives us the wherewithal to assess the validity of Tanner's assessment. He also tells us more than is commonly known about Wittgenstein's relationship to Schumann, to Wagner and also to Hanslick (a frequent visitor to the Wittgenstein household). Wittgenstein clearly warmed to Hanslick's notion that in listening to a piece of music the listener imaginatively follows the composer on a journey through both the familiar and the strange, an attendance that can in Hanslick's words 'be intensified to the level of spiritual achievement'. But where Wittgenstein would have departed from Hanslick was in the critic's notorious formalism, that music is just music: for Wittgenstein music was clearly never *only* music – it reached out to the world, it

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was a world. This is certainly what we feel in reading Wittgenstein's outbursts about music, and about the culture from which different music arises and which it reflects, on all of which Szabados has interesting things to say. What the remarks themselves amount to, though, is another question altogether, as we might feel if we imagined them as having been uttered by someone else.

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