

DANIEL GARBER, *Leibniz: Body, Substance, Monad*. Oxford: Oxford University Press, 2009. Pp. xiii + 428. ISBN 978-0-19-956664. £35.00 (hardback). doi:10.1017/S0007087410001081

Leibniz was a careful and painstaking writer, striving always to express himself with clarity and precision. So why is he so difficult to read? One reason lies in the nature of the writings that have come down to us. Since we lack a substantial and systematic exposition of his philosophy, it must be reconstructed from a handful of published papers, a mass of drafts (often reworked, and thus difficult to date with any confidence) and a great body of correspondence. A second reason is the sheer breadth of Leibniz's thought: his thinking about the theory of matter belongs primarily to metaphysics, but has to be responsive to concerns in theology, mathematics, physics and even biology. In any given context, the reader has to work out which concerns are uppermost in Leibniz's mind and which are of secondary or background importance. Chronology adds a third layer of difficulty. We know that Leibniz changed his mind on key issues from time to time, but when, and for what reasons? The seemingly interminable labours of the editors of the Akademie edition may help to resolve some of these questions, but puzzles are sure to remain.

But perhaps the greatest source of difficulty for modern readers of Leibniz lies in the subtle hierarchies that structure his thought. Where other philosophers saw outright contradictions, Leibniz saw opportunities for reconciliation. Is our universe a vast machine, a weird sort of hyper-zoo (organisms within organisms *ad infinitum*), or a community of minds, rather like a choir of angels? Leibniz answers that it is simultaneously all three, and promises that if we just attend carefully while he draws the necessary distinctions, we will see how this is possible. Mechanism, vitalism and animism are all true – within their proper domains. This is clearly some task he has set himself, and there are reasons for thinking that he never completed it even to his own satisfaction.

The theory of matter lies right at the heart of Leibniz's proposed synthesis. We know that he rejected the Cartesian claim that the essence of matter is merely extension, arguing that this could provide neither true units (every extended thing being divisible *ad infinitum*), nor any grounding for natural powers (the later Cartesians fell into occasionalism). In opposition to the Cartesians, Leibniz defended an 'Aristotelian' or hylomorphic account of material substance. The term 'Aristotelian' needs to be used with some care here, since this theory is a reworking of a scholastic reworking of Aristotle, responsive not just to traditional metaphysical arguments but also to Leibniz's own new science of dynamics. Study of the natural world, Leibniz insists, shows that matter cannot be adequately characterized without powers, and these cannot be found in mere extension but belong to the substantial forms of things. Developing this line of thought led Leibniz, in the 1680s, to a pan-organismic picture of Nature, a view aptly described by Garber as 'bugs within bugs'.

The current orthodoxy is that Leibniz came to abandon his 'middle-period' Aristotelianism around 1700, as evidenced by the letters to De Volder of 1703 and 1704. In place of the pan-organismic theory of corporeal substances, we now find the new theory of monads, unextended mind-like or spiritual substances. As for corporeal substance, it is now regarded as either an aggregate of monads or (more plausibly) a mere phenomenon or appearance. At the bottom level, all that exists are the monads and their perceptions. If this interpretation of Leibniz's philosophical development is correct, we are faced with two obvious questions: when precisely did Leibniz abandon the theory he had previously been at such pains to develop, and why did he drop his earlier view? What weaknesses did he come to perceive in the 'Aristotelian' theory of his middle period?

This mainstream account of Leibniz's development can be attacked from either side. Scholars such as Christia Mercer and Robert Adams claim that elements of the monadology can be

found much earlier than 1700, and argue for a reading of Leibniz that takes him close to full-blooded idealism. On the other side Pauline Phemister argues that Leibniz never abandoned his ‘Aristotelian’ account of corporeal substance, and insists that the monads were not intended wholly to supplant the roles played by the corporeal substances of the 1680s. Garber makes it clear that his sympathies lie closer to Phemister than to Mercer and Adams. If we find passages from the 1680s or 1690s that seem to betoken the idealism of the *Monadology*, this may, Garber thinks, be merely a product of hindsight. On the other hand, there is evidence even from Leibniz’s final decade that he still thinks in terms of corporeal substances. Maybe Leibniz, the eternal conciliator, thinks that the two theories are not rivals at all, but can be reconciled with the aid of a few key distinctions and a proper emphasis on the hierarchical structure of Reality.

Garber’s interpretation offers two immediate advantages for the Leibniz scholar. In the first place, we can give a charitable interpretation of the otherwise puzzling correspondence with Des Bosses in 1712, and of Leibniz’s notorious allusion to a mysterious *vinculum substantiale* holding the monads of an organism together. If Leibniz is firmly committed to phenomenalism at this time, it is hard to absolve him of the charge of dissimulation and even insincerity. In the second place, Leibniz often asserts conditionals of the form, ‘If matter is not to be a mere phenomenon, then ...’. If Leibniz himself firmly believes that matter is a mere phenomenon, these conditionals are for him counterfactuals, useful perhaps for ad hominem purposes or as antecedents for a *reductio ad absurdum*. But if Leibniz himself is uncertain about the status of the antecedent, they can serve a much more constructive role in directing his thought away from idealism and back to some reworked version of the theory of corporeal substance of his own middle years.

In a well-known paper, Catherine Wilson has argued that Leibniz’s system is merely illusory. Reading this wonderfully learned and insightful discussion of a central issue of Leibnizian metaphysics might provide further evidence for her thesis. If Leibniz really did think he could have his cake and eat it – that is, have a Reality that was both a community of minds and a hyper-zoo of endlessly nested organisms – then of course he had a great deal of explaining to do. But this does seem to have been the state of his mind when death caught up with him in 1716. I do not think we should conclude that Leibniz’s system is merely illusory. His thought definitely aspires to be systematic, but never quite settles down in definitive form. It is not so much an illusion as a work in progress.

ANDREW PYLE  
*Bristol University*

CELINA FOX, *The Arts of Industry in the Age of Enlightenment*. New Haven and London: Yale University Press, 2010. Pp. viii + 576. ISBN 978-0-300-16042-0. £40.00 (hardback).  
doi:10.1017/S0007087410001093

Were it not for the copious scholarship, Celina Fox’s *The Arts of Industry in the Age of Enlightenment* could be taken for a coffee-table book. Large, splendidly illustrated and as beautiful as an art gallery catalogue, this magnificent volume surveys with an unprecedented degree of thoroughness the relationships between the mechanical and fine arts during the long eighteenth century. Yale University Press is renowned for its publications on art, yet unusually this one is also about machines: although the last picture is a full-colour river-and-castle landscape by J.M.W. Turner, the first is a full-page detail from the cross-section of a boiler. Viewed as a material object, this book embodies Fox’s twinned aims of challenging simplistic arts/science distinctions and of retaining flexible cartographic boundaries when mapping out the past. Or as