Booknotes

Are 'supervenience' and the scientific reductionism associated with that curious notion now denoting what Imre Lakatos referred to as a 'degenerating research programme'? For Lakatos volume of work and publication could actually be a sign of degeneration – if the craft in question seemed to be sinking under the weight of its own cargo, while other lighter, more agile skiffs skim away from the impending wreck in other directions. Two such skiffs, moving fast away from supervenience, have recently been published by Oxford University Press, *Without Hierarchy: The Scale Freedom of the Universe*, by Mariam Thalos, and *Naturalism and the First-Person Perspective*, by Lynne Rudder Baker.

Mariam Thalos will be well-known to readers of *Philosophy* as a double prize-winner in recent our essay competitions (see *Philosophy* April 2013, and the present issue). *Without Hierarchy* manifests the same sort of independence of mind which marked her essays. For while Thalos rejects any kind of reductionism in science or philosophy, she insists that she is not an emergentist, nor does she see properties and modes of being neatly stacked up in any sort of hierarchical fashion, as her title indicates. Her vision of the universe, which includes human activity in this picture, is of multiple, mutually independent schemes of order, which intersect and overlap, though never completely. If we have, say, a conscious biological organism, the stuff which makes up its body is no doubt composed of particles and forces described in physics, and in that sense and in this case the stuff of biology is the same as that of physics, but the bulk properties do not follow from the micro-structure, nor are we to regard its physical aspects as fundamental to the organism. It seems that different systems of organisation simply appear when certain conglomerations are present, but we are not to regard any as either lower or, indeed, higher in any non-relative sense.

Thalos is fundamentally a systems thinker, and she has interesting things to say about the extent to which physics itself is systemic. Thus such phenomena as non-locality and (we might suggest) the two-slit experiment indicate that the behaviour of particles is dependent on more than the localised behaviour of individual particles, taken individually. According to her the systemic nature of set-ups even in microphysics indicates a failure of supervenience within physics itself. Systems, so to speak, and top-down causality go all the way

doi:10.1017/S0031819114000047 © The Royal Institute of Philosophy, 2014

https://doi.org/10.1017/S0031819114000047 Published online by Cambridge University Press

down, even into the quantum world. From this perspective, individual entities come to look like abstractions from the structures which make them what they are. In her own words, 'nothing exists as the thing that it is – not pigs, not dinosaurs, not electrons – except as it is appropriately conditioned by an appropriate structure. There are no independent entities.'

It is easy to see how this multi-faceted systems approach would get a grip in describing biological and social behaviour, and without any temptation to invoke supervenience. How exactly the new systems come about may still need more explanation than we get, but the picture is novel and intriguing, and it also leads Thalos to say interesting things about causality (she prefers to talk about 'dependence relations'). She also writes about science as what might be called an engineering practice (in potential thrall to practical and political ends of various sorts), as opposed to science as exemplifying a pure desire to know, apart from any practical use – and hence, in her view as inexplicable on evolutionary-cum-natural selection grounds. Thalos insists (indeed, some might think, protests too much) that she is a naturalist (i.e. not a supernaturalist) and also that she rejects any 'levels' type of emergentism, in which 'higher' levels of activity arise from 'lower' levels. Nevertheless it is hard not to see some sense of levels in what she tends to describe as just 'various' types of processes and systems as obtaining within the universe, and indeed as being 'put together from scratch'.

Lynne Rudder Baker is also keen to describe herself as a naturalist and she also believes in downward causation, but, unlike Thalos, is quite happy to be an emergentist. As her title suggests her book is less wide-ranging than Thalos', focusing as she does on the first-person perspective. In general her aim is to show how reductive naturalism fails to accommodate the first-person perspective. We have both inner lives and, over and above that, by virtue of possession of language, self-interpretation. Self-interpretation involves not just having a first person perspective (which conscious animals and human infants also have), but the capacity to reflect on that, and hence also on what we believe, desire, intend and so on. Baker says 'when our biological ancestors developed robust first person perspectives (along with grammatically complex first person sentences), entities of a new kind – persons – came into being… persons are ontologically unique – irreducible to what constitutes them.' Diverging from Thalos, Baker is quite explicit at this point. Both agree that while sums of molecules constitute people (and fire escapes), sums of molecules are fundamentally different kinds of things from

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people (and fire escapes). But Baker insists that here 'I mean levels of reality', so not, one supposes, hierarchy-less scale freedom here.

Baker's book is so clearly and so patiently argued that her readers may begin to wonder how the philosophers she is criticising could ever have sought to deny or to explain away the first-person perspective or its significance. But before seeing her essay as a vindication of the metaphysics of the commonsense world, as she at one point suggests, it is worth noting that on free will she argues in favour of a compatibilist (i.e. determinist) position. That aside, are we right to see Thalos and Baker together as symptoms of any general move by philosophers away from reductionism and supervenience in the philosophy of mind? And, emergentist or not, might their joint and powerful arguments against a narrow physicalist reductionism prompt a renewed interest in the conditions in the universe which allow for different levels of reality or, if like Thalos, we dislike levels talk, for various types of mutually interacting and non-reducible order? In other words, if not supervenience on the physical, then what?

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