

SCHAFFER ON THE ACTION OF THE WHOLE

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I argue that Schaffer's recent defence of *Spinozan Monism*—the thesis that the cosmos is the only substance, or the only fundamental and integrated thing—fails to establish that the universe is uniquely fundamental. In addition, Schaffer's own defence of his thesis offers the pluralist about fundamentality a model for responding to Schaffer's criticism of pluralism.

According to Jonathan Schaffer, the cosmos, the entire material universe, is the unique substance or 'fundamental and integrated thing' (2013, p. 68). Schaffer offers two arguments for this thesis of *Spinozan Monism*, both centring on the claim that the cosmos is a substance because it 'evolves by the fundamental laws' (p. 67), with that condition understood in a very particular way: the behaviour of the cosmos, the evolution of its intrinsic state, is always exactly as the physical laws—or our fundamental theories expressing them—predict. In both of Schaffer's arguments for *Spinozan Monism*, a thing's evolving by the fundamental laws is sufficient to secure for it the status of a substance. Schaffer's primary argument also counts evolution by the fundamental laws as necessary for substancehood, incorporating as a premiss the biconditional *Leibnizian Substance* (LS): 'Something is a substance if and only if it evolves by the fundamental laws' (p. 67).

On one reading, LS is unobjectionable but of limited interest: LS expresses a particular, perhaps historically inspired, way of defining 'substance'. It then turns out that the cosmos counts as the only substance in this sense—but it is not entirely clear what hangs on this outcome. On the alternative reading, LS is not primarily concerned with the definition or application of the honorific 'substance' but with the identification of things that are metaphysically fundamental and unified in broad senses of clear importance to contemporary metaphysics. Schaffer does seem to have quite broad senses in mind: 'A thing is fundamental if and only if it depends on nothing further,

and a thing is integrated if and only if it is not an arbitrary gerrymander but displays natural unity' (Schaffer 2013, p. 68). LS then connects a thing's possession of these metaphysical features to its evolution by the physical laws.

Even philosophers sympathetic to the idea that the metaphysically fundamental things are those that somehow figure in the laws of physics may quite understandably balk at the second, stronger, but apparently faithful reading of LS, which precludes from counting as a fundamental unity anything that is physically affected by—or whose lawful evolution is physically dependent on—a distinct thing. If LS is true, the only candidates for substances are entirely closed physical systems. Since no proper part of the universe is a closed system, no proper part of the universe is a substance. But it is far from clear that metaphysical fundamentality and unity are, intuitively, so strongly connected to physical isolation or independence.

There is a minor logical point that, when noted, might seem to render Schaffer's claim a bit more palatable. If we take 'substance' to be defined conjunctively as fundamental and integrated, as Schaffer suggests, then both the truth of LS and the fact that the cosmos is the only closed physical system are logically compatible with the existence of multiple fundamental but non-substantial things. This might seem to recommend a weaker reading after all, a bit closer to the honorific proposal: there is only one special substance, but there still may be lots of things that are fundamental (or integrated, just not both). Schaffer's own position, however, appears to be stronger. He says that 'essentially ... something is fundamental if and only if this fundamental equation [expressing a fundamental law] applies to it with full accuracy' (2013, p. 68). He seems, then, to endorse *Leibnizian Fundamentality* (LF): Something is fundamental if and only if it evolves by the fundamental laws.

Since LF does not logically follow from LS, at least not without a supplementary assumption that a thing is fundamental only if it is integrated, Schaffer's existing motivation and defence of LS does not obviously suffice to establish the tight link that LF expresses between metaphysical fundamentality and evolution by the fundamental laws. For example, Schaffer responds to *Leibnizian Substance, Plural* (LSP), a proposed pluralistic alternative to LS on which '[s]ome things are substances if and only if they co-evolve by the fundamental laws', by drawing only on considerations of integration, not fundamentality: but '*Leibnizian Substance, Plural* does not

fit with the idea of substances as integrated. From the fact that some things co-evolve by the fundamental laws, one can only infer that this plurality acts as one. One cannot infer that any individual in this plurality has the natural unity of a substance' (Schaffer 2013, p. 73) Because this criticism of LSP turns entirely on integration, it fails to address the possibility that multiple co-evolving parts of the cosmos might count as fundamental while still, perhaps, failing to count as integrated substances in Schaffer's sense.

Now, this point may seem to be mere hair-splitting, since the natural pluralistic counterpart to LF appears to be a non-starter. In fact, we can quite straightforwardly adapt Schaffer's criticism of LSP to criticize the thesis *Leibnizian Fundamentality, Plural* (LFP), according to which some things are fundamental if and only if they co-evolve by the fundamental laws: Take 'the plurality whose two members are the sum of all left feet, and its mereological complement (the cosmos minus the sum of all left feet)'; since these together compose the cosmos, they 'collectively evolve by the fundamental laws'. Even setting aside Schaffer's primary concern that 'they are each mere heaps without natural unity', the pluralist presumably will not want to admit that they—or many of the other things that together compose the cosmos—count as fundamental (2013, p. 73). That is, the pluralist will not want to endorse LFP, even though it is, *prima facie*, her natural alternative to LF.

The sensible pluralist move should be to say that co-evolution by the fundamental laws is not sufficient for fundamentality, but, at best, is necessary—perhaps it is still true that only things that (co-) evolve by the fundamental laws are candidates to be fundamental. A worry, though, is that such a revision to LFP is, or may appear to be, *ad hoc*. Can someone antecedently sympathetic to the idea that metaphysical fundamentality is closely tied to (co-)evolution by the fundamental laws have some non-question-begging reason for making this revision? Can she say what she really wants to say, which is that there is a single level of fundamental individuals that together compose the cosmos and that co-evolve according to the fundamental laws?

By Schaffer's own lights, the answer should be 'yes'. For one thing, Schaffer's second argument for *Spinozan Monism* relies on the addition of the '*Aristotelian Principle*' that '[n]o proper part of a substance is a substance', and one willing to grant this might very naturally grant, too, that no proper part of a fundamental thing is fundamental. In fact, Schaffer himself motivates his Aristotelian

premiss with the claim that ‘substances are fundamental entities’ and so should be ‘open to free recombination’, which entails that wholes and their parts, which are not open to free recombination, should not (both) be counted as fundamental (2013, p. 83; see also Schaffer 2010b). Thus Schaffer should grant that there is antecedent motivation for restricting the set of fundamental things to a single ‘level’ of entities—in which case not all things that jointly compose the cosmos need count as fundamental for the pluralist.

In addition, Schaffer takes LS to rest on a prior, modalized principle specifically phrased ‘to avoid overdetermination of fundamental powers’—that is, to restrict fundamentality to a single level in the way that the pluralist wishes (2013, p. 84). In fact, the pluralist can herself retreat to a modalized principle, paralleling Schaffer’s own move. Schaffer insists that, since LS is not a modalized claim, it does not offer any guidance about other possible worlds. So, for instance, endorsing LS does not force him to grant that another world of two entirely closed physical systems contains three substances—each of the systems plus their sum—and so parts equally fundamental to their whole. However, he grants that there is a relevant modalized metaphysical principle, *Leibnizian Substance, Modalized*, that applies to such a world and underlies LS’s applicability to our world: ‘It is metaphysically necessary that something is a substance if and only if it has an evolution governed by the fundamental laws’ (Schaffer 2013, p. 84). Crucially, ‘governing is always restricted to a single mereological level’. He explains: ‘*Leibnizian Substance* encodes the minimal condition of *match* between prediction and behaviour. This minimal condition is sufficiently discriminating for worlds like ours in which prediction and behaviour match at exactly one mereological level, but needs strengthening in worlds like the two-monad world in which prediction and behaviour match at multiple mereological levels, to discriminate the level of match reflecting the workings (“governance”) of the fundamental laws from the level resulting as a by-product’ (2013, p. 84). The governance restriction is meant to address the very sort of worry that LFP raises for the pluralist. For the pluralist, the match between prediction and co-evolving behaviour expressed by LFP is not sufficiently discriminating for our own world. Our pluralist can offer an alternative, appropriately modalized, metaphysical principle that parallels Schaffer’s: it is metaphysically necessary that some things are fundamental if and only if they have a co-evolution governed by the fundamental laws.

Once the pluralist restricts fundamentality to a single mereological level at a world, she need not admit that all things that compose our cosmos count as fundamental. She can say that co-evolution according to the fundamental laws is, here, merely a necessary condition for fundamentality—stating a necessary and sufficient condition requires appeal to governing. And just as *Leibnizian Substance, Modalized* does not yet say which mereological level—whole or parts—reflects the workings of the fundamental laws in a two-monad world but leaves it as ‘a substantive matter’, our pluralist’s modalized principle leaves open which level of cosmos-composing, co-evolving things in our world counts as fundamental—and it does so in a way that is well motivated in the dialectical context (2013, p. 84 n.24).

Elsewhere, Schaffer (2010a) offers independent arguments for the conclusion that the cosmos is the single fundamental thing, as opposed to the only fundamental and integrated substance, and the pluralist should evaluate these arguments on their own merits. The main thing to note here is that Schaffer’s particular appeal to LS fails to do the philosophical work that he takes it to do—it fails to rule out the possibility of a fundamental plurality and so fails to establish the cosmos as a unique fundamental substance.¹ For notice that a particularly conciliatory pluralist can simply grant LS. She can agree that something is a substance—something is both fundamental and integrated—in Schaffer’s sense if and only if it evolves by the fundamental laws, and she also can grant that the cosmos is the only relevantly integrated candidate for a substance, so defined, in our world. However, she will also go on to deny that anything in our world is, in fact, a substance in Schaffer’s sense, since she will deny that the cosmos is one among her many fundamental things—fundamentality, after all, is to be restricted to a single mereological level.

¹ This result is perhaps particularly worrying for Schaffer in light of his expressed scepticism concerning the utility of the metaphysical category of substance and preference for the notion of (fundamental) thing (2013, p. 81).

REFERENCES

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