New twists on the great chain of being

Ricki Bliss and Graham Priest (eds), *Reality and Its Structure. Essays in Fundamentality,* 2018, 324pp.

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According to a common view in the history of philosophy and science, reality is organized into a series of layers, elements of which depend on elements of lower layers, until one reaches a fundamental layer: the galaxies and quasars are ‘on top’, the lakes and snakes are somewhat in the middle, below them come molecular compounds, and at the very bottom lie the phenomena discussed in particle physics. Various notions have been used over the years to clarify this picture: relative fundamentality, ontological dependence, metaphysical grounding, all of which are standardly taken to have the formal structure of a *strict partial order* (SPO), i.e. an irreflexive and transitive (and so asymmetric) relation on the domain of reality. It is also commonly assumed that this order is *well-founded*, in the sense that all chains of so ordered items terminate in a foundational element.

The recent, growing work in analytic metaphysics devoted to the clarification and critical discussion of this broad picture has however shown a significant interest in various possible alternatives sketches of reality’s structure*.* In the case of grounding, for example, irreflexivity and transitivity have both been challenged, individually (Jenkins 2011, Schaffer 2012) and collectively (Rodriguez-Pereyra 2015). Moreover, just like Agrippa’s trilemma requires epistemologists to choose between unjustified, circular or endless justifications, some metaphysicians have contrasted the *metaphysical foundationalism* built in the standard picture with a *metaphysical coherentism* (e.g., Bliss 2014, Thompson 2016), allowing for circles and symmetries of metaphysical dependence, and a *metaphysical infinitism* (e.g., Morganti 2014), according to which chains of metaphysical dependence extend indefinitely without ever reaching an ultimate foundation. The nice collection of essays edited by Ricki Bliss and Graham Priest, aptly entitled *Reality and its Structure*, aims to systematically question all the details of the traditional picture and explore its alternatives in an open-minded and anti-dogmatic spirit.

In their introduction, Bliss and Priest offer a useful map of the logical space of the debate. Given a notion of metaphysical dependence–taken as an umbrella term covering the more specific notions of grounding, metaphysical explanation, ontological dependence, etc.–they delineate four theses that provide the subject-matter for the rest of the book:

1. The Hierarchy Thesis, according to which metaphysical dependence induces a strict partial order on reality.

2. The Fundamentality Thesis, according to which all chains of metaphysical dependence reach a foundational element.

3. The Necessity Thesis, according to which an entity cannot be fundamental without necessarily being so.

4. The Consistency Thesis, according to which the order induced by metaphysical dependence is consistent.

Contributions dominantly addressing HT are gathered in Part I, those dominantly addressing FT are placed in Part II, while NT and CT are discussed in Part III.

Although HT is often simply taken for granted as “natural” or “intuitive” in the literature, some direct arguments for the view are nevertheless available and open to discussion. For example, it has been claimed that it is part of grounding’s job description to account for the layered structure of reality (DeRosset 2013). One may then be tempted to argue that grounding has to be a SPO for it to do this job properly. In his contribution to the collection, Gabriel Oak Rabin however proposes principles connecting grounding to layers that allow grounding to generate a layered structure, even in the absence of irreflexivity, asymmetry, or transitivity. In her chapter, Ricki Bliss addresses the main metaphysical and explanatory arguments in favor of the irreflexivity of metaphysical dependence. On the one hand, it may be argued that self-dependent facts are metaphysically objectionable, for self-dependence entails essential existence, which in turn entails necessary existence. On the plausible additional assumptions that all fundamental facts are self-dependent and that metaphysical dependence has the modal force of necessitation, it follows that all facts obtain with necessity. Bliss blocks the unwelcome conclusion by questioning the move from self-dependence to essential existence, since essential existence only requires a dependence between existence and essence, which is not an instance of reflexive dependence. On the other hand, it may be argued that reflexive metaphysical dependencies are explanatorily defective because the explanations they yield are trivial, uninformative and useless. Bliss responds that an ability for some fact to explain itself, should it hold, is neither trivial nor uninformative. Regarding explanatory usefulness, she suggests that the point of reflexive explanations is to let us know that “we have arrived at some fact that simply does not stand in need of further explanation” (87).

In addition to general arguments, a number of examples or cases are presented throughout the book to suggest that the structure of reality is at least not always best captured by SPOs. Elizabeth Barnes describes a series of *prima facie* consistent metaphysical views which plausibly require a non-asymmetric relation of ontological dependence, while Daniel Nolan defends the coherence, conceivability and possibility of scenarios involving “cosmic groundings loops”, i.e. scenarios where “the whole structure of grounding ensures that if you follow the chain around from any point, after long enough steps, you can arrive back where you started” (91). Graham Priest gives an exposition of Huayan Buddhism which he interprets as a form of metaphysical coherentism, according to which all things depend on all other things. Examples of structuralist views, such as mathematical structuralism discussed by Naomi Thompson, Jon Erling Litland, and John Wigglesworth, and ontic structural realism in the metaphysics of science, addressed by Matteo Morganti, provide a reservoir of cases supporting various forms of metaphysical coherentism. Barring non-asymmetric relations of interdependence thus seems like an unnecessary and potentially damaging restriction for explaining the structure of reality in all its richness. Of course, the force of these considerations varies with the very plausibility of the cases themselves, and the plausibility of their interpretations. *Prima facie* cases of symmetric dependence may sometimes be also thought of as cases where asymmetric dependence relations of distinct types go in opposite directions. For instance, is it necessary for Aristotelean metaphysicians to consider the metaphysical dependence of immanent universals on their particular instances and that of particulars on universal essences as dependencies of the same type? While the former relation of dependence seems to concern the existence of the dependent entities, the latter seems to be about their nature or identity. If so, *pace* Barnes, this hardly counts as a genuine case of symmetrical dependence, even though it does yield a more complicated and less hierarchic view of the structure of reality. In any case, it is important to have a varied number of concrete cases, coming from a variety of sources including physics, mathematics, metaphysics, and even literary fiction (Borges 1949) to make the discussion more concrete and applicable to live issues; for this reason at least Bliss and Priest’s collection is a very useful resource for the assessment of HT.

The fate of FT in the second part closely parallels that of HT in the first. There are two main reasons for holding FT, since the contradictory hypothesis that all facts have (irreflexive) grounds *ad infinitum* raises two possible difficulties. The first one is that facts *inherit* their reality from their grounds. Since, as a matter of principle, an inherited property must have a source, it follows that non-fundamental entities have to be ultimately grounded by groundless, i.e. fundamental, entities (Schaffer 2016: 95). The second reason is that an indefinite chain of grounds constitutes a vicious circle. Einar Duenger Bohn, in his chapter, rejects the first one on the grounds that inheritance arguments are based on a dynamical metaphor which is misleading when applied to the synchronic relation of grounding. Kelly Trogdon’s contribution offers a more detailed analysis of inheritance arguments. While he rejects the inheritance arguments for FT as inconclusive, he shows how an inheritance principle can be made to work in order to argue for restricted forms of foundationalism, such as *causal* foundationalism, i.e. the view that, necessarily, any non-fundamental entity with causal capacity is fully grounded by fundamental entities. Regarding the second reason, the difficulty is to say precisely what makes an infinite regress of grounds *vicious*. Bohn considers various reasons to take the regress to be vicious and rejects all of them. Jago’s contribution exposes an original conception of ground based on a link between grounds and natures. The basic principle is that the nature of an entity grounds its grounding conditions, e.g., the nature of conjunction grounds the fact that the truth of a conjunction is grounded on the truth of its conjuncts. If Jago’s account of grounding is correct, then grounding has to be a SPO, for new metaphysical reasons tied to the nature of natures (and, interestingly, not addressed by the critics of HT in the first part of the volume). But it does *not* settle FT since it is compatible with objects having infinitely complex natures. Examples of structuralist views in mathematics and physics are also exploited by Wigglesworth and Morganti to show how FT can be avoided, in certain regions of reality at least. Although FT as such finds no staunch defender in the volume, Tuomas Takho elaborates an original interpretation of the sort of foundationalist intuition that he understands and accepts: the world is organized into levels of ontological elements and the fundamental level consists of ontologically minimal elements. This notion of ontologically minimal element can be understood by reference to a generalized notion of parthood, i.e. component or integral part, that is not in general transitive. Interestingly, the ontological minimality thesis is compatible with some sort of metaphysical infinitism, i.e. infinitely “boring” descents where the same pattern of ontologically minimal items repeats all the way down.

NT and CT are newcomers in this debate, and their discussion in Part III further contributes to the value of the collection. Nathan Wildman clarifies and defends the “contingent fundamentality thesis” (roughly the negation of NT) while Filipo Casati develops two brands of para-foundationalism, using foundational structures where metaphysical dependence is both irreflexive and non-irreflexive, and where being is both self-identical and not self-identical, respectively, to offer an intriguing para-consistent interpretation of Heidegger’s ontology and theology of the “last God”. It is not clear what could motivate para-foundationalism outside of Heidegger’s thought, but if the game is to explore as clearly and rigorously as possible alternatives to the standard view, Casati’s chapter is no doubt a nice play.

Bliss and Priest’s collection offer a valuable addition to the fastly growing literature on the metaphysics of fundamentality. It nicely combines the updating and development of views already present in the literature with new and original proposals. Although the choice to focus on alternatives to the standard HT and FT is clearly asserted by the editors, a stronger presence of the orthodoxy may have given a more balanced treatment of the main issues, offering impartial readers a better view of the strengths and weaknesses on each side. This being said, the full range of alternatives to the standard picture is still to be explored, consolidated, and criticized. From that perspective, *Reality and its Structure* provides a cutting-edge collection of essays that will no doubt become a standard reference on the non-standard metaphysics of fundamentality.

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