**(April 2019) UNBELIEVABLE similarities between some articles from a book edited by Bliss and Priest (2018) and my ideas (2002-208)**

***(2018) Reality and its Structure - Essays in Fundamentality,* Ricki Bliss and Graham Priest (eds.), Oxford Univ Press**

The content of this paper is about the following articles from the above book:

*Gabriel Oak Rabin (2018)* **Grounding Orthodoxy and the Layered Conception**

*Daniel Nolan (2018)* **Cosmic Loops**

*Naomi Thompson (2018)* **Metaphysical Interdependence, Epistemic Coherentism, and**

*Tuomas E. Tahko (2018)* **Holistic Explanation Fundamentality and Ontological Minimality**

*Matteo Morganti (2018)* **The Structure of Physical Reality Beyond Foundationalism**

*Nathan Wildman (2018)* **On Shaky Ground? Exploring the Contingent Fundamentality Thesis**

**1**

**Grounding Orthodoxy and the Layered Conception**

*Gabriel Oak Rabin*

generatmg a total order from a partial order.

However, there are reasons to be optimistic that the ordering characteristic of

the layered conception can be gleaned from the grounding graph. First, as discussed

above, we can look for patterns in the particular grounding claims. There

are many .such patterns. Sometimes the patterns are specific (neural firing depends

on potassmm-sodium ion imbalance). Other times they are not (each instance of

cuttlefish ca~ouflage depends on some chemical property). But the patterns are there.

If they weren t, the layered conception wouldn't be so appealing in the first place.

Second, we may not want the layered conception to deliver a total ordering. Both

geol~gy ~d psychology are above chemistry. Neither lies above the other. Two options

remam: (i) they are at the same level or (ii) they are incommensurable.

If the layer.ed conception demands a total ordering, then (i) is the only option.

A total orden.ng does not permit cases in which two items are incommensurable.

However, I thmk that option (ii) is preferable, and that we should give up the idea

that. the layered conception requires a total ordering. (p 41)

In cases of symmetric ground, what should we say about the layering relations of

the items that ground each other? We should not place either above the other. This

leaves two options, which we've already seen: (i) they are at the same level or (ii) they

are incommensurable. I believe that (i) is the better option here. x and y are related by ground. It seems odd to say that they bear no relation to each other in reality's

layering. The layering is still a layering based on dependence. And x and y depend on

each other. I propose we place x and y on the same level.

Considerations involving the transitivity of ground further support placing x and Y

on the same level. The transitivity of ground will guarantee that, in cases of symmetric

ground, the symmetric grounders will be *at the pseudo-same level.* For any x and y, x

and y are *at the pseudo-same level* in reality's layering if and only if for any z, if z is

above x, then z is above y, and if z is below x, then z is below y. In simple terms, two

items at the pseudo-same level are both above, and below, all the same stuff. This does

not quite guarantee sameness of level. x and y might still be incommensurable. … I admit that my arguments leave some space for claiming that symmetric grounders

are incommensurable in level. But given that (a) they are related by dependence and

(b) they are at the pseudo-same level, I believe we should say that they lie at the same

level in reality's layering. (43-4)

[Obviously, the reader can have the feeling as if the above sentences were written under the EDWs perspective! Of course, I know the author did not read any of my work…]

In contrast, symmetric ground, in which every time x grounds y, y also grounds x,

completely voids the basic idea. Ground will never give us the result that x is above (or

below) yin reality's layering. In Section 4, I argued that in cases of symmetric ground

we should maintain that the symmetric groundees should be placed at the same level

in reality's layering. If this is correct, then ground will provide some, but not much, guide to reality's layers. Ground will be sufficient for sameness oflevel. But some other

relation will be required to do the heavy lifting in the generation of reality's vertical

hierarchy. (45-6)

7 Conclusion

The key to making unorthodox views about the formal properties of ground compatible

with the layered conception is to recognize that there is a gap between what

grounds what and the layered conception. One can't just "read off" reality's layering

from the facts about ground. The move from what grounds what to reality's layering

is substantive. I believe we should be optimistic about gleaning from the facts about

ground a useful and informative structure that roughly matches our pre-theoretic

conception of how the features of reality are layered.

First, principles linking ground and layering, or fundamen:ality, sud: as the sim~le

and/or slightly less simple principle, give us a healthy start m generatmg a layenng

from ground. But the task of evaluating the patterns in the g~mmding relat~ons

between particulars, and gleaning from those patterns a layenng of the Vanous

properties, and types of properties (geological, biological)'. re~ains'. Second, we may

have to abandon some of our pre-theoretic ideas about reahtys layering. I argued that

we should abandon the claim that reality's layering generates a total order. Geology

and biology are incommensurable; neither lies above or below the other. The layering's

order is closer to total than ground's order. But both are partial.

The gap between ground and layering both helps and harms. It harms because it

makes the task of discerning reality's layering more difficult. Even after we possess

a complete story of what grounds what, we must still do philosophical work to

determine what is more fundamental than what. It helps because it permits the

layering to be well-behaved even when ground is not. For example, symmetric cases

of ground don't force us to claim that the symmetric groundees each lie above (or

below) the other in reality's layering.

The grounding orthodoxy ensures that ground behaves nicely. It will. be a g~od

little transitive, anti-symmetric, irreflexive, foundationalist relation. This obedient

behavior ensures the absence of problematic grounding structures, such as loops, that

create problems when we move from ground to reality's layering: But the heretics.are

out there. Not all theorists of ground believe in the orthodoxy. Ive covered a vanety

of reasons to doubt various parts of that orthodoxy. These theorists will probably be

willing to give up some nice behavior in order to have a theoretical tool that can do

the metaphysical work they want done. For this reason alone, it's worth exploring how

reality's layering might go if we accept an unorthodox view about ground and want to

maintain an intimate link between ground and the layered conception. (48)

In the end, we might reject the arguments of Barnes, Bliss, Jenkins, and Schaffer,

and maintain that the orthodoxy about ground is correct. But knowing that the

layered conception is perfectly compatible with the heretical views that challenge the

orthodoxy should grease the wheels for rejecting that orthodoxy (a move with which

I have considerable sympathy). A non-orthodox view of ground can not only have a

nice layering of reality, but the non-orthodox view is, in various ways, better suited to

that layering. The grounding heretics can have their (layered) cake and eat it too.4 (49)

[Again, when I read this article, I had the feeling as if the author were working within the EDWs perspective writing this article…]

**4 Cosmic Loops**

*Daniel Nolan*

Other

patterns in the world come with convenient layers that are less all-encompassing: the

relation of part-to-whole can be used to order my fingernail as part of my finger, my

finger as part of my hand, my hand as part of me. On its own, it will not serve as a

convenient way of ordering everything, since there are distinct hierarchies of parts:

my table leg is not part of my leg, nor vice versa. We would have a cosmic loop of

part-to-whole if we started with one world (call it world 1) which had many atoms at

one end of the part-whole hierarchy, and at the other end of the part-whole hierarchy

a Universe that contained everything as parts, and considered another world, world 2,

with the same pattern of part-to-whole except that the thing which was the Universe

of world 1 was part of all the things which were atoms of world 1. In world 2, you

could follow the chain of "part of" relations starting at the object which is world l's

Universe, right around to that very object again. World 2 would plausibly contain a

cosmic grounding loop too, given the common assumption that wholes are grounded

in their parts. (Perhaps world 2 would only be an impossible world, rather than a

possible one: more on this question in Section 3 below.) While I have hopefully said enough to get the idea of cosmic loops across, I have

not yet provided a general definition. Rather than bogging down in a specification that

avoids various tricky corner cases, I will present some exemplars which we may use as

paradigms: especially since the issues that arise for my exemplars don't really depend

on whether we have pinned down a unique concept of cosmic loops. One thing I do

want to leave open, at least as far as the definition of"cosmic loop" goes, is that cosmic

loops of ground might co-exist with shorter loops of ground. Again, time provides a

useful analogy: even if the entire universe is a great temporal loop, say with a big bang

at the "start" also serving as a big crunch at the "end'', there may also be shorter loops

created by time-travel machines or unusual spatio-temporal wormholes. Likewise,

even if there are cosmic loops of ground that go "all the way around", there may also

be short loops (e.g. the fact *that there are some facts* may ground itself1 ). I also want

to allow that a loop can be cosmic without bringing everything in a universe into its

scope: a layer-cake universe might have several cosmic loops that contain a member

from each layer, but do not share any members.

When we are considering cosmic loop scenarios, which loops will be grounding

loops will depend on what kinds of relationships go along with relationships of

grounding in those scenarios. I suppose that we could brutally stipulate grounding

connections between different entities or facts, but it will be more natural, and more

familiar, to think of grounding as going along with other relationships, such as the

part-whole relation or the determinate-determinable relation. (92)

[Is it not World 1 and World2 UNBELIEVABLE similar to EDWs?]

4 Recovering "Local" Irreflexivity, Symmetry,

and Transitivity in Cosmic Loops

A scenario can be a cosmic loop scenario even if grounding is closed under transitivity

in it: these are cases where everything in a circle of ground grounds everything in that

circle, including itself. But there is a more natural way to understand many of these

circles of ground as being intransitive: while A grounds B which grounds C which

grounds D which grounds E which ... grounds A, these are not scenarios where A

grounds itself or is somehow a *causa sui.* Or at the very least, this seems plausible

for many of the entities in these loops: maybe TFSBL or the One are most naturally

thought of as self-grounders, but entities in the "middle" of each loop, a given human

hand, for example, are not naturally thought of as self-grounders.

Even aside from this natural thought, it will be interesting to explore what the

options are here for recovering *local* irreflexivity, asymmetry, and transitivity in

cosmic loop scenarios. That is, to what extent can we "save the appearances" and allow

that *even if,* on some cosmic scale, there is a loop of grounding, we need not change

our attitudes to the grounding relationships that hold, for example, between the cells

and other components of my hand and my hand itself, or between the distribution

of rain, clouds, and lightning, on the one hand, and a thunderstorm, on the other?

Can things as we ordinarily take them to be be embedded in a cosmos containing one

or more cosmic loops at scales we are unfamiliar with? (Compare: in a universe with

a unique big crunch that is immediately before its unique big bang, the direction of

time might still be *locally* one-way, with no small loops letting people live through

2014 before 2013.)

What would "local" mean in this context? One stab at characterizing it would be to

say that grounding is *locally* irreflexive, asymmetric, and transitive iff when we restrict

the domain of entities quantified over to some domain *D,* then for all x in *D,* x does not

ground x, for all x and yin *D,* if x grounds y then y does not ground x, and for all x, y,

and z in *D,* if x grounds y and y grounds z, then x grounds z. Then we should insist on

some restrictions on the appropriate *D* so that it is appropriately "local''. We would be

aiming to capture the idea that with a certain "distance'; grounding behaves as if it is

irreflexive, asymmetric, and transitive, and cases where there are loops of ground only

show up when we look at "long distances''. The challenge then is to specify the relevant domains *D* that are "local" to each other, or alternatively to specify a "distance" so that

any entities within that distance of a given object 0 count as belonging to the same

domain Das 0. (99-100)

[Do you have the feeling of being within the EDWs??? I have this feeling… Of course, I am sure the author did not read my works…]

5 **Metaphysical Interdependence, Epistemic Coherentism, and Holistic Explanation**

*Naomi Thompson*

Structural realists of a metaphysical variety take structure and relations not to

be merely derivative of the entities or structural nodes they relate, but to be more

ontologically fundamental than has traditionally been assumed by scientific realists

(Ladyman, 2014). Esfeld and Lam (2010) develop a version of metaphysical structural realism that they term 'moderate structural realism' and which holds that relations

require .relata, but that it is not the case that the relata necessarily have intrinsic

properties over and above the relations they bear to one another (Esfeld and Lam,

2010: 13). In other words, there are objects, but those objects are wholly characterized

by the relations in which they stand.

It follows from this characterization of moderate structural realism that there is

a mutua~ dependence between relations and relata-the objects are characterized by

th~ relations that relate them, and the relations themselves are characterized by the

ob3ects that stand in the relations. There is, therefore,

· · . a mutual ontological as well as conceptual dependence between objects and structure

(relations): objects can neither exist nor be conceived without relations in which they stand,

and relations can neither exist in the physical world nor be conceived as the structure of the

physical world without objects that stand in the relations. (Esfeld and Lam, 20 IO: 13-14)

Explaining facts about the nature of a given object is a matter of citing facts about

the relations that object bears to other objects, facts about which are themselves to be

explained in terms of the relations they bear to further objects (and to the object which

was our starting point). Since facts about the structure through which the objects

are related themselves depend on facts about the objects themselves, a moderate

structural realist picture has it that giving an explanation will be a matter of pointing

towards a mutual dependence between explanans and explanandum. Tue relevant sort

of explanation here is a grounding explanation; facts about objects are grounded in

facts about relations, and vice versa. Moderate structural realism thus gives us a case of

symmetric metaphysical explanation, and therefore of metaphysical interdependence. (118-9)

[Again, I have the feeling of reading my ideas! Of course, Esfeld and Lam did not read my works (2002-2008)!]

12

**Fundamentality and Ontological Minimality**

*Tuomas E. Tahko*

This chapter deals with the idea that reality comes with a hierarchical structure of

'levels'.1 1 Some of the material presented here is based on the discussion in Tahko 20 I Sa, Ch. 6.

*Generic Ontological Fundamentality* (GOF): 'Ibe world is organized into 'levels' of

ontological elements and the fundamental 'level' consists of ontologically minimal

elements. (245)

The more general line of thought here is that the liberal sense of parthood is not

obviously transitive-this may have further consequences regarding what counts as a

minimal truthmaker on one hand and an ontologically minimal element on the other.

So there could, perhaps, be an understanding of ontological minimality whereby

we should only be concerned with the parts that are *integral* to an object, even if

these parts are composed of further parts. (246)

Finally, recall that on one interpretation the cone in Figure 12.1, in the beginning of

this paper, could be considered to represent different *kinds* of things, where 'kinds' are

considered as *natural* kinds. If we apply the idea of ontological minimality here, what

we get is something like the following: an ontologically minimal description identifies

all and only the most fundamental natural kinds. These natural kinds could be kinds

of fundamental particle, like those listed in the Standard Model, or they could be the

structures identified by (OSR). Moreover, they could perhaps even be *symmetries,*

as the idea that symmetries are fundamental is now emerging as a candidate view,

supported by physics (cf. McKenzie 20 l 4b ). The association with fundamental natural

kinds is in fact quite an interesting understanding of the ontological minimality thesis,

but since specifying this option would require much more detail about the nature of

natural kinds, I will not be relying on this reading here (but see Tahko 20 l Sb). (250)

[obviously, other UNBELIEVABLE similar ideas to my ideas. Tahko has other articles with UNBELIEVABLE similar ideas to my ideas – see above)

**13**

**The Structure of Physical Reality Beyond Foundationalism**

*Matteo Morganti*

269 'Hybrid' Views

More generally, the

investigation of more articulated views on metaphysical structure, whereby one model does not necessarily rule out the other, promises to be of interest. Why not think that

some aspects of reality have a structure of one type, and others a different one? (269-70)

[Exactly the relationship between my EDWs!!!!]

In connection to this, it is perhaps useful

to point out that the sort of pluralism just envisaged is by no means harmful for

the idea that grounding is a useful philosophical concept. For, exactly in the same

way in which, as mentioned earlier, a non-monolithic notion of grounding is ok,

provided that one is truly dealing with a non-causal relation with sufficiently welldefined

general features and clear explanatory power, one should have no problem

with a multifaceted account of the structure of reality, provided that, by endorsing it,

one obtains good explanations for the domains of things one aims to account for. After

all, to repeat, why should reality possess a uniform, all-encompassing metaphysical

structure just because (maybe) we would like it to? (270)

[Again, this view is UNBELIEVABLE similar to my EDWs!]

**14**

**On Shaky Ground? Exploring the Contingent Fundamentality Thesis**

*Nathan Wildman*

Interestingly, the contingency of fundamentality is also compatible with priority

pluralism, according to which there are at least two fundamental entities, neither of

which are the cosmos. In fact, it can help the pluralist handle *de re* modal objections to their position. Suppose that Quarky is one of the actual fundamental entities.

Assume that gunky worlds seem possible-that is, it's possible that the material

world is such that every object has proper parts. In the gunky worlds, Quarky looks

derivative, grounded in its (infinite series of) proper parts. So, goes the objection,

because Quarky fails to be fundamental in the gunky worlds, Quarky isn't actually

fundamental after all. However, if fundamentality is contingent, this argument doesn't

go through: that Quarky isn't fundamental in gunky worlds says nothing about its

fundamental status in the actual world. 12 (281-2)

12 Cameron (2007: 13) makes a similar point, but in a different context. Further, Schaffer seems to suggest

that pluralists should take fundamentality to be contingent, when he says that 'the pluralist who treats, say, a

given electron as [fundamental] can grant that it may be divisible into small constituents, and then it would

no longer (by her lights) be [fundamental]' (2013: 81). One interesting area I hope to explore in future work

is how contingent fundamentality relates to Schaffer's (2010c) modal objection to priority presentism.

What's problematic for the contingentist is if the relational property *being derivative*

*from Quarky* is essential to Tommy; for this would entail that, in every world where

Tommy exists, he's derivative (and hence not fundamental). But what wouldn't be a

problem is if Tommy was essentially such that, *if Quarky exists, Tommy is derivative*

*from it.* Tommy's essentially-and hence necessarily-possessing this conditional

property doesn't prevent him from being fundamental in worlds where Quarky isn't

around. 17 It does preclude Tommy being fundamental in worlds where Quarky also

exists, but that's fine-all we need to protect contingent fundamentality is a world

where Tommy exists and is fundamental!

More generally, the contingentist can accommodate the ground-essence link by

conditionalizing the relevant properties, such that x essentially is such that if y exists,

then *x* depends upon it. Possessing these conditional essential properties preserves the

ground-essence link (it's still part of Tommy's essence that he's derivative from Quarky

*whenever it's around),* but is also perfectly compatible with *x* being fundamental in

worlds where y doesn't exist. 18 The upshot is that the essence-ground connection

alone doesn't tell against contingent fundamentality. 19

Admittedly, this conditionalizing move won't be available to those who think that

(i) the fundamental entities must be ontologically independent, and (ii) that an entity

is ontologically dependent on whatever appears in facts about its essence. However, I see little reason to accept the latter-instead, IQ suggest that an entity ontologically

depends on those things that both appear in facts about the entity's essence *and* exist.

This leaves room for contingent dependence (and hence contingent fundamentality),

and is, I think, a close, contingentist friendly, surrogate for (ii).

There is one potential drawback to this conditionalizing move: it might turn out

that it's part of Tommy's essence that, if the world was populated with some weird

ectoplasmic goo, then Tommy is derivative from it. 20 But, one might sensibly object,

this simply isn't part of Tommy's essence-Tommy is in no way related to this

weird goo! However, note that we only said this *might* be part of Tommy's essence.

Nothing said so far commits the conditionalizer to gooey-Tommy worlds, and hence

to including such a property in Tommy's essence (indeed, we might take our vitriolic

response as a good reason for thinking there are no such worlds). In other words,

not all conditional properties will make it into Tommy's essence. Of course, we'll

need some reason for including/excluding the relevant ones, but that's a task at least

partially to be determined by our epistemology of essence. And, until we can show that

*no* conditional properties make it in, there's space to maintain the conditionalizing

reply. So it seems we can preserve the ground-essence link and still be contingentists

about fundamentality.

A third objection to contingent fundamentality concerns negative explanations.21

Grant, for the sake of argument, that tables are derivative, but possibly fundamental.

Now, go to any world where tables don't exist. What explains the fact that there are

no tables? The standard answer is something like the fact that there are no table-wise

arrangements of simples. But, given that tables are possibly fundamental, this isn't a

complete explanation-after all, it might be that, even though there are no table-wisearranged

simples, some *fundamental* tables exist. Consequently, given contingent

fundamentality, our explanations for the non-existence of entities are compromised.

One line of reply is to say that it's part of what it is to be a table that it be composed of

tablewise-arranged simples-so, every table-world is also a table-arranged-simplesworlds-

but still maintain that tables are possibly fundamental-that is, there are

some worlds where tables exist and are fundamental, along with some worlds where

tables are derivative. This would block the above objection, but at the cost of denying

the idea that mereological structure mirrors priority structure, since it allows for

mereologically complex objects to be fundamental.22 (282-3)

The *necessitarian thesis* says that the things that are fundamental necessarily existthat

is, for all x, if x is fundamental, then x necessarily exists. In contrast, the

*contingentist thesis* says that at least some of the fundamentalia contingently existthat

is, for some x, xis fundamental and possibly, x does not exist.23

23 23 These theses are phrased in terms of existence, but they can be readily altered to accommodate those

who, like Williamson (2013), think that all objects necessarily exist by e.g. changing 'exists' to 'is concrete'. (284)

So the necessitarian

thesis makes necessary existence a necessary, but not sufficient, condition for being fundamental, while the contingentist thesis allows for some necessarily existing

fundamentalia; it just denies that necessary existence is a necessary condition for

being fundamental. (284-5)

In contrast, our final

package agrees that some fundamentalia contingently exist, but also claims that the

grounding structure of the world is similarly fundamental-that is, this position

endorses the contingent fundamentality thesis, and takes being fundamental to be a

non-necessary property. (285)

Suppose that A and B are the fundamental entities. On this view,

they both necessarily exist and are necessarily fundamental. So, they exist and serve

as the metaphysical foundation for every world. But let C be some merely contingent

existent. C must be derivative from some combination of A and B. So, in worlds

where C exists, it is grounded in (e.g.) A. But given that A is necessary, every world

is an A-world. So why isn't every world also a C-world? We might try to explain the

A-but-not-C-worlds by appeal to the existence of some blocker D in those worlds,

but that won't help because D must also be derivative from some combination of

A and B, and unless we want to say that D is necessary (which, if it's a blocker

for C, entails C can't possibly exist), we're stuck with the same problem as regards

the existence of D. Without a satisfactory story to tell here, this package looks like a

non-starter. 25 (286)

We can make this problem more acute by thinking about *Shifty Shaky,* which

allows for contingent fundamentalia that are only contingently fundamental. This

position can explain variation in priority structure in terms of variation in existence:

x is derivative in w' because y exists in w' and, in that world, x depends upon/is

grounded in y, while xis fundamental in w because y-the thing that x would depend

upon-doesn't exist in w. So Quarky the quark is fundamental in the actual world

because there's no gunk for Quarky to depend on, but in gunky worlds, Quarky

depends upon-and hence is derivative from-a certain glob of gunk. Packages that

are committed to the necessitarian thesis have no recourse to this kind of explanation.

For them, everything that is possibly fundamental exists in every world, so we can't

explain priority variation in terms of existential variation. (286)

[The same observation: reading this article, I had the feeling the author had written it within the EDWs perspective!!! Of course, just UNBELIEVABLE similarities…]