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ORIGINAL RESEARCH

Varieties of Metaphysical Coherentism

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Abstract
According to metaphysical coherentism, grounding relations form an interconnected system in which things ground each other and nothing is ungrounded. This potentially viable view's logical territory remains largely unexplored. In this paper, I describe that territory by articulating four varieties of metaphysical coherentism. I do not argue for any variety in particular. Rather, I aim to show that not all issues which might be raised against coherentism will be equally problematic for all the versions of that view, which features far more nuance and diversity than is typically ascribed to it.

1 Coherentism

The question "what is the overall structure of grounding relations?" is often framed as a choice between three alternatives.[1] The grounds may form a finite series in which every fact is ultimately grounded by some set of ungrounded facts, an infinite non-repeating series in which any fact is grounded by some further fact *ad infinitum*, or a non-linear structure in which facts (perhaps derivatively) ground each other.[2] The first two views—foundationalism and infinitism—have many acolytes.[3] The

[1] For example, by Schaffer (2009, 37), Morganti (2014, 223) (2015, 557), and Westerhoff (2020, 165). For an overview of this debate, see Ó Conaill and Tahko (2018, 5-6), Tahko (2018a, Section 1.3), Dixon (2020), or the papers in Bliss and Priest (2018b).

[2] I assume, here and throughout, that the *relata* of grounding are facts, *contra* Cameron (2008, 5), Schaffer (2009, 375-376), and others. If occasionally I fall back on expressions suggesting grounding between non-facts, these should be taken to refer elliptically to some corresponding fact. Also, here and throughout, coherentism is understood in terms of partial grounding. When I refer to "grounding" without qualifying it as full or partial, I mean the latter.

[3] Some prominent defenses of grounding foundationalism are Cameron (2008), Schaffer (2009), Schaffer (2010), Bennett (2011), Bennett (2017), Dasgupta (2016), or (in modified form) Tahko (2018b) and Raven (2016). Some prominent defenses of grounding infinitism are Markosian (2007), Bohn (2009), Cotnoir (2013), Morganti (2014), Morganti (2015).

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last—coherentism—has fewer.[4] Perhaps due to the view's relative unpopularity, it has most often been treated with broad brushstrokes, leaving the vast logical territory which may be occupied by coherentist views unexplored. The many varieties of metaphysical coherentism have gone largely unnoticed. In this paper, I will set out a range of forms that the view might take, and evaluate some of the unique strengths and weaknesses of each. As it will become clear, not all the varieties are equal, both in terms of their plausibility and ability to overcome objections. As such, even philosophers who are generally unsympathetic to coherentism will be served well by articulating with greater nuance the forms of the view to which they object.

The views I'll discuss may be considered variations on a single theme because of their shared feature: coherence. In broad terms, I understand coherence to be "a harmonious connection of the several parts, so that the whole 'hangs together.'"[5] Occasionally, philosophers describe a set of propositions as coherent when it contains no contradictions. The structures described by foundationalists in epistemology and metaphysics, in which fundamental beliefs or facts asymmetrically justify or ground all the others, count as coherent in this basic sense, so long as they contain no contradictions. But metaphysical coherentists—like their epistemic counterparts—understand coherence as more than mere non-contradiction. They emphasize the second part of the general definition, harmonious *hanging together*, as the distinguishing feature of coherent structures. In this latter sense, a set of beliefs is coherent to the extent to which its elements "fit together or 'dovetail' with each other, so as to constitute one unified and tightly structured whole."[6] So, a structure gains coherence in this more substantive sense as its elements increasingly support or fit with each other.

In the case of epistemic coherentism, the relations in question are ones of justification: in a coherent structure of beliefs, beliefs participate in justifying each other. Epistemic coherentists see in such structures the precise representation of appropriately justified knowledge: for them, knowledge is a harmonization of a whole body of beliefs in such a way that each increases the likelihood of every other. Metaphysical coherentism, on the other hand, alleges that such a coherent system is constituted by metaphysical relations of ground.

The task of articulating the precise conditions and measure of coherence is notoriously difficult. Fortunately, it may be set aside for now: in this paper, I aim only to frame an intramural debate among the varieties of coherentism in metaphysics, and evaluate the strengths and weaknesses of each.[7] For that purpose, it will suffice

[4] Among them Bliss (2014), Bliss (2013), Nolan (2018), Thompson (2016), Thompson (2018), Morganti (2019a), Morganti (2020), and Calosi and Morganti (2021).

[5] See Oxford English Dictionary Online entry "coherence, n."

[6] BonJour (1999, 123)

[7] One debate which I bracket concerns the formal properties of coherentist grounding. Often, grounding is assumed to be a strict partial order: irreflexive, transitive, and asymmetric. Coherentists must reject asymmetry, and, since asymmetry is implied by the combination of irreflexivity and transitivity, one of the latter two as well. To my mind, this represents a choice-point for coherentists. Thompson (2020, 264) suggests that views which maintain mutual grounding should deny irreflexivity. But rejecting either becomes far more plausible once we consider that any plausible coherentist web will be relatively large: many connections would be exceedingly tenuous, connecting things only through the mediation of oth-

to say that a system's coherence (in the more substantive sense beyond mere non-contradiction) increases along with the increasing ratio of unique, direct relationships among elements to the number of elements in that system.[8] That is, a system in which two elements are symmetrically related to each other is more coherent (in this sense) than is a system containing ten elements, each of which is related only to two other "neighboring" elements.[9]

But why might one consider coherence to be a valuable feature of a metaphysical view? Coherentism is not just intrinsically interesting as an under-explored position in logical space: the increasing skepticism regarding some of the grounding literature's underlying assumptions suggests that coherentism deserves to be taken seriously. Two additional reasons should incline us to be interested in coherentism. First, as a view which paints a metaphysical picture of extensive interconnection and interdependence, coherentism offers a way for the concept of grounding to be used to capture the metaphysical commitments of views and entire traditions which diverge markedly from contemporary analytic metaphysics.[10] In particular, cashing out such views in coherentist terms offers a principled and transparent way to engage with views which are inadequately represented in today's philosophical mainstream.

Second, a compelling case for coherentism can be made based on the conceptual connections between grounding, explanation, and understanding. Roughly, the argument goes like this.[11] Grounding is universally acknowledged to be *somehow* associated with metaphysical explanation. Although the precise nature of that association is today the topic of debate, all parties seem to agree that, somehow or other,

Footnote 7 (continued)

ers, in a kind of indirect way. Denying irreflexivity, then, might be combined with the clarification that things only contribute to grounding themselves in a derivative way: facts will ground themselves because of their relationship with other facts. They couldn't do so on their own. Something may end up grounding itself, just because of how it is bound up with other things. On the other hand, transitivity could be denied with a similar caveat. That caveat is that things don't end up getting grounded in a kind of direct way by all the other participants of the grounding web: they are only grounded by their immediate "neighbors" and are related in a sort of mediated way to other participants in the web. Since, on this suggestion, the "mediated" relationship is *not* identical to grounding, it amounts to a plausible denial of transitivity, and represents an alternative to Thompson's suggestion. Although these moves are both unorthodox, I don't consider either absurd.

[8] The specification that the relationships must be unique captures the intuition that, in a system in which certain things are related to each other *many times over* does not gain coherence over a system in which many things are related.

[9] In this definition, I leave unspecified the *kind* of relation in which the elements may stand. Certain epistemologists maintain that coherentism is only plausible if beliefs are woven into systems consisting of *diverse* epistemic relations, like deductive or probabilistic entailment, justification, or explanation, each playing a unique role in the formation of knowledge. The present definition cannot accommodate such coherentist views. However, note that we are interested specifically in coherentism involving solely relations of *ground*. This definition aptly represents views in which there is but one metaphysical structuring relation, a widely-held assumption in the grounding literature.

[10] For similar applications of grounding to characterize views from non-Western philosophy, see, for example, Kang (2017), Priest (2018), or Westerhoff (2020)

[11] Although I know of no published statement of this argument as described here, it seems to be suggested by Thompson (2016) and Barnes (2018). Ismael and Schaffer (2016) also invoke similar considerations related to explaining and understanding, but consider them to be evidence for a slightly different view.

by discerning the grounds, we encounter some explanation.[12] Explanations, in turn, distinctively (have the potential to) shed some light, or clarify, or render intelligible: explanations offer understanding. Often, understanding is characterized as a unique epistemic state distinct from—and perhaps more valuable than—mere knowing. According to Kvanvig's influential account, understanding, unlike mere knowing, "requires the grasping of explanatory and other coherence-making relationships in a large and comprehensive body of information. One can know many unrelated pieces of information, but understanding is achieved only when informational items are pieced together."[13] So, we may conclude that if grounding is, indeed, associated with explanation, it should offer us some understanding, which, in turn, is plausibly a matter of grasping how things cohere with each other. Coherentism, according to this argument, best accounts for how, by discerning what grounds what, we may truly understand the world.[14]

Again, my goal here isn't so much to argue that coherentism, in general, is true. Rather, I aim to explore what forms the view may take, and weigh the comparative merits of each. With this brief introductory description of the view behind us, let us now turn to that task. According to the approach to the question of overall structure with which I began this paper, coherentism is the view on which nothing is ungrounded, but there is mutual grounding. I'll call the following two commitments the "Coherentist Canon":

> *Coherentist Canon*: (i) For any x, there is some y such that y grounds x, and (ii) there is some z and some w such that z (perhaps indirectly) grounds w and *vice versa*.[15]

The Canon's first part is a rejection of foundationalism. The second is a rejection of infinitism. I'll consider any view committed to the Canon a variety of coherentism. The view is not monolithic: interesting, incompatible facets and specifications, consistent with the Canon, remain unexplored. I will consider four, progressing from most to least revisionary. I will call them *holism*, *insularism*, *hierarchism*, and *rebarism*. The diversity and variety of metaphysical views coherentism affords is a testament to the fact that it may resist many *prima facie* problems and objections if it is refined and made more nuanced in response to them. Getting a better sense of that diversity, which I outline in this paper, also permits us a richer and more sophisticated understanding of this relatively unpopular view.[16]

[12] For details on this debate between "separatists" and "unionists", see Raven (2015, 326), and Brenner, Maurin, Skiles, Stenwall, and Thompson (2021).

[13] Kvanvig (2003, 188). For broadly coherence-based accounts of understanding, see also Zagzebski (1996; 2001), Riggs (2007), De Regt (2008), Grimm (2011; 2018), Baumberger, Beisbart, and Brun (2017), or Lynch (2016).

[14] I will return to the contributions of coherence to understanding in Section 5.

[15] Recall that, here and throughout, when I refer to "grounding" unqualified, I mean partial grounding.

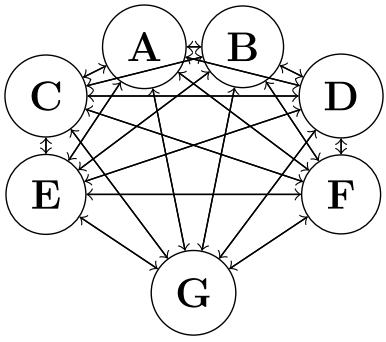
[16] I don't mean to deny that coherentism's rivals aren't analogously diverse: it is a desirable feature for any view that it can be modified in response to objections.

2 Holism

In their survey of views about the structure of grounding, Bliss and Priest use "coherentism" to mean a view on which "everything depends on everything else".[17] Others also characterize coherentism as positing an absolute ubiquity of grounding relations.[18] Call this "holism".

Holism: For any *x* and any *y*, *x* (partially) grounds *y* and *y* (partially) grounds *x*.

Here's a diagram of a simple holist structure WH.[19] Each circle represents a distinct fact. Each arrow points from the grounds to that which is grounded. Each arrow represents only partial, not full, grounds. An arrow with two points indicates mutual partial grounding.



A holist world WH

In WH, each fact both partially grounds and is partially grounded by each other fact: a double arrow connects any two among A–G.[20] According to the general characterization above, a system's (substantive) coherence is a function of the ratio of (direct and unique) relationships among its elements to the number of elements in the system. A holist world, in which everything is grounded by everything else, features the maximal possible degree of coherence: there could not possibly be any

[17] Bliss & Priest (2018a, 10)

[18] For example, Thompson (2018, 123), Tahko (2018a), Blilss (2019, 337).

[19] Strictly speaking, WH is only *part* of a holist world. No holist world can, like WH, contain only seven facts. The facts represented here imply an infinite number of conjunctive facts like [A & B], [A & C], [A & [A & B]], and so on. So, WH represents only a *section* or *part* of a holist world.

[20] According to a certain strain of thought in the Mahayana Buddhist tradition, everything ontologically depends on everything else. An evocative image likens the world to a many-jewelled net, with a jewel suspended wherever two lines intersect. Each jewel shines with the reflections of the other jewels which surrounds it. For a description of the Indra's Net metaphor, see Cook (1977, 2). For descriptions of *Pratityasamutpada*, the doctrine of universal dependence, in the language of 21st century analytic metaphysics, see Kang (2017) and Priest (2018). Although dependence is distinct from grounding, it seems plausible that grounding relations run alongside dependence relations. If the Mahayana's universal dependence is true, it suggests that grounding holism is true as well. Thanks to Li Kang for bringing this to my attention.

additional unique grounding relations. Insofar as coherence is, on its own, a reason to be drawn to coherentism—perhaps because a more coherent system of grounding relations offers the best sense of understanding reality—holism is at least an attractive starting point. At the very least, it is worth considering because it seems to be the most "pure" form of coherentism. For example, according to Morganti, any view which rejects the absolute ubiquity of grounding—that is, any of the views discussed here other than holism—isn't coherentism, but a "hybrid".[21]

Holism is hard to believe. It implies *many* more grounding relations than we typically countenance. Among them, for example, is: the fact that I am conscious is partially grounded by the fact that the Eiffel Tower is in Paris. That the location of the Eiffel Tower would contribute to the metaphysical explanation of my consciousness—and, perhaps more impressively, the other way around—is incredible. Of course, mere incredulity—in form of stare or otherwise—is no decisive objection.[22] That many "respectable" metaphysical views—modal realism, four-dimensionalism, mereological universalism or nihilism, and so on—strain credulity is not considered decisive evidence against them. Revisionary metaphysics aims to revise our thinking about possibility, time, or other only apparently familiar concepts, motivated by the more rationally complete picture of reality that revision affords. That it prompts an incredible revision of ordinary thinking is not, on its own, a decisive reason to reject holism.[23] This result is more worrying once we consider how our intuitive judgments about what grounds what—perhaps informed by the best current science—might be the best evidence of how things truly stand. Then, holism's counter-intuitiveness doesn't just demand drastic revisions. It implies the view to be drastically at odds with the best evidence for our beliefs about the nature of reality.

Another problem for holism may be described as "contamination". Intuitively, certain classes of facts just can't mix: certain kinds of facts cannot, by their nature, be metaphysically explained by certain other kinds of facts. Consider, for example, what it is for a fact to be objective, rather than subjective. An objective fact is in no way settled or made the way it is by what any subject thinks, prefers, or values. In other words, an objective fact—or, at least, a fact possessed of a certain strong kind of objectivity—cannot have any subjective facts among its grounds.[24] Conversely,

[21] Morganti (2018, 269)

[22] See, for example, Lewis (1986, 134–135).

[23] Perhaps holism's incredulity problem is slightly different than the same problem for views like four-dimensionalism or modal realism. Whereas the latter demand a radical revision of relatively ordinary notions like time or possibility, holism posits a revision of an at least partly technical notion of grounding. If holism is true, it is not the "person in the street", but a contemporary metaphysician who alleges there to be asymmetric grounding relations among individuals and singletons or brains and minds, who is badly misguided.

[24] Of course, certain objective facts may be partially grounded by subjective facts. For example, one might think that the fact that the price of lumber is increasing is partially grounded by the fact individuals consider lumber valuable. Facts about prices are objective, while facts about what people consider valuable are subjective. So, it seems like at least one objective fact may be grounded by a subjective fact. I suspect that, in reality, there is another non-subjective fact in the vicinity which is the genuine grounds for the objective fact in these instances. After all, perhaps it's the objective fact about how much someone is willing to pay for lumber—rather than the subjective fact about how much they value it—which

any fact grounded by a subjective fact will, itself, be partially subjective. The property of subjectivity, then, might be said to "contaminate" facts from grounds to what is grounded. Holism cannot stop such contamination from spreading across all that there is. If holism is true, every fact is grounded by every other fact. So, if there is even one subjective fact, all facts will be grounded by it. Therefore, by the contaminating property of subjectivity, all facts will be subjective. Conversely, there will be no objective facts. The contaminating property of subjectivity leaves the holist in an uncomfortable position: she must deny either that there are any subjective, or any objective facts.[25]

Subjective facts are just one among many classes of facts which appear to have the contaminating property. Consider conventional and non-conventional facts. If ϕ is a conventional fact—or, more colloquially, if it is just a matter of convention that ϕ—and ϕ grounds ψ, it must be the case that ψ, too, is conventional. Call X a "contaminating property" if X is a property of facts such that any fact grounded by an X fact will, itself, be X. The following sound like plausible classes of contaminating facts: *social*, *conventional*, *mental*, *phenomenal*, *freely chosen*, *fictional*, *ineffable*, and so on.[26] For each kind of contaminating fact, the holist faces an all-or-nothing dilemma: either every fact belongs to that class, or none do. Certain contamination dilemmas may have plausible, not unprecedented answers. Nor must all be solved in the same way. The holist may argue, for instance, that there are *no* facts which are the products of free choices (hard determinism), but that *all* facts are mental (idealism). But, in response to each kind of contamination, the radical answer the holist must accept will likely not be without theoretical cost.

A related problem is the surprising fragility of holist worlds. If holism is true, any fact's failure to obtain will ripple through the whole world, erasing every other fact.[27] To illustrate the problem, recall the simple holist structure WH. Could the facts in WH obtain without each other? Call a fact's "modal profile" the set of worlds at which it obtains. Two facts which obtain at precisely the same set of worlds may be said to share a modal profile. As I will now argue, if holism is true, all of the facts in WH have precisely the same modal profile: each obtains in all and only the same possible worlds as all the others.

Many maintain that grounding necessitates, perhaps because grounding is governed by metaphysical laws which do not differ across worlds. This means that if x grounds y in some possible world, there is no world which contains x, but not y,

Footnote 24 (continued)
truly explains facts about the cost. But even if certain objective facts do have subjective facts among their grounds, it is not likely that all objective facts do. But that's precisely what holism is committed to.

[25] I am assuming that all facts are either objective or subjective. I suspect that the holist's response, in this case, is to reject the distinction altogether. Perhaps this move is plausible with respect to this feature, although other classes of contaminating facts seem to present more difficult challenges.

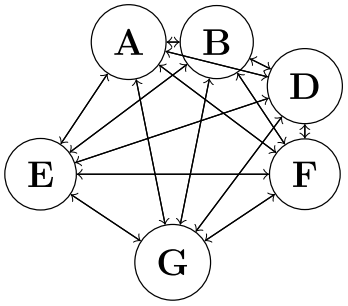
[26] I grant that this list is controversial. For example, it may be the case that facts about the nature of God are ineffable, and also that those facts ground all other facts (which are not ineffable). I'm not trying to show that any one of these particular facts are, indeed, contaminating. My claim is only that, insofar as there are any contaminating facts of the kind I'm describing, those facts create a problem for holism.

[27] Thanks to Ricki Bliss and Nathan Wildman for discussion on this point.

because x will ground y in any world—such a world would demand that the laws of metaphysics which dictate that x ground y in one world do not dictate the same thing in another world. If we assume necessitation, the fragility of holist worlds follows: since A grounds *every other fact* in WH, there is no world which contains A, but not *every other fact*, because A will ground everything else in any world. On the other hand, any world which does not contain some other fact from WH—C, for example—*cannot* contain A: if that world *did* contain A, it would, by necessitation, contain C as well. If holism is true, the same can be said of *any* fact: any fact is equally integral to all others.

But why should the holist accept necessitaiton? After all, her view is already revisionary, and she may prefer to avoid fragility by claiming that grounding is contingent: although A grounds everything else in WH, it *need not* do the same in other possible worlds (perhaps because the metaphysical laws governing grounding *may* differ across worlds after all). I'll now briefly argue that, even without dogmatically accepting necessitation, holism will end up committed to modal fragility.

For *reductio*, suppose that WH's C had failed to obtain, while all the other facts obtained. Then, there is a possible world containing WH2, which is just like WH, except C is missing.[28] Here's WH2.



Another holist world "WH2"

Whereas, in WH, A was grounded by six other facts, it is grounded by only five facts in WH2 (the same is true for the other facts as well). Now, if B, D, E, F, and G jointly suffice for grounding A in WH2, they should also suffice in WH.[29] What

[28] Recall that neither WH nor WH2 are representations of complete worlds, since each would also contain innumerable conjunctive facts constructed out of the facts represented here. See footnote 19.

[29] Recall that I characterized holism, WH, and WH2 in terms of *partial*, rather than *full* grounding. That is, in WH, B–G are A's *partial* grounds individually, and A's *full* grounds collectively. The fragility problem arises precisely because, when C is taken away in WH2, A's full grounds aren't so "full" any longer, and it seems, somehow, not grounded enough. Holism phrased in terms of full grounding avoids fragility, but faces the opposite problem. If each of B-G are A's full grounds, A can get along just fine without C, for it has plenty of grounds apart from it. But holism with full grounds faces another threat: any fact with more than one full grounds seems problematically overdetermined (although it is far from clear whether metaphysical overdetermination is itself a problem, see Bliss MS). Thanks to Ricki Bliss and Nathan Wildman for excellent discussion on this point.

could C contribute to the metaphysical explanation of A in WH, if WH2 features an (apparently) perfectly legitimate metaphysical explanation of A in which C does not figure?

If A can go on just as it did in WH when deprived of C in WH2, C must not have been contributing to grounding A in WH after all. But this is contrary to the holist assumption that everything grounds everything else. On the other hand, if C had been genuinely grounding A (and all the others) in WH, WH2 would be impossible: each of the facts would be missing part of its metaphysical explanation. So, on holism, if WH is possible, WH2 is *not*: C's absence would have erased all the other facts. Conversely, if WH2 is possible, WH is *not*: C is not contributing to grounding anything in WH2, so it cannot genuinely contribute so in WH! So, there can be no difference in modal profile between C and the other facts. All facts stand and fall together, and no fact can survive the loss of any other fact. If ours is a holist world, then, it seems to be far more fragile than comfort permits.

Holists may avoid the fragility problem in situations in which a fact has more than one full ground. Consider, for example, disjunctive facts. [P ∨ Q] is fully grounded by [P] and fully grounded by [Q]. If just one of [P] or [Q] were to fail to obtain, [P ∨ Q] would still obtain. Or, consider generic dependence, rather than rigid dependence. If a ship generically (not rigidly) existentially depends on its parts, the ship will continue to exist whenever *some parts or others* (not necessarily those parts of which it is actually composed) exist. Neither disjunctions nor ships are exceedingly fragile: the former (occasionally) obtain despite the loss of a disjunct, the latter (occasionally) exist despite the loss of parts. In both situations, either other grounds—replacement parts, or other disjuncts—step in to fill the gap left by those which are missing, or such gaps may simply be considered acceptable. A holist concerned about her world's fragility may remedy the problem by likening the grounding relations among facts to such situations. She may claim that each fact, like a disjunction, has redundant full grounds—it may survive even if those facts no longer hold. In that sense, each fact's relationship to its grounds is like the relationship between a cat and its tail. Even though the tail is an integral part of the cat so long as he does not lose it, he survives even if that tail becomes, through unfortunate accident, detached from him. Or, she may claim that each fact, like a generically dependent entity, has other possible grounds (distinct from its actual grounds). These additional commitments take holism further afield from standard assumptions about ground. But both offer a means for holist worlds to dodge fragility.

Holism is strongly revisionary. Holists endorse surprising theses, among them our own metaphysical contribution to the existence of the Eiffel Tower, the integralness of each fact to all else, and either the total subjectivity or non-subjectivity of all facts. Perhaps these—individually or collectively—are compelling evidence against the view. Or, at least, since they show holism to depend on a number of contentious metaphysical assumptions, they are reasons to be suspicious of the view until we are furnished with compelling evidence to believe that those assumptions accurately represent reality. This is particularly troubling to those who consider neutrality a virtue of an account of grounding. But whatever obstacles holism may face, these

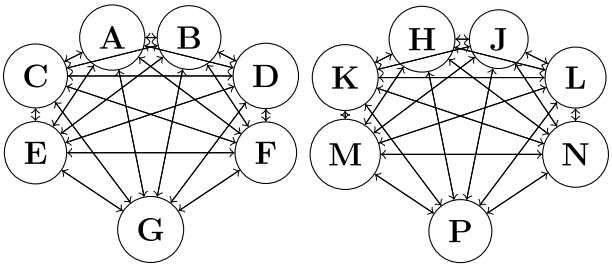
shouldn't be considered obstacles for metaphysical coherentism—at least not all forms thereof. The Coherentist Canon may be retained in a more restricted form by more conservative varieties of coherentism.

3 Insularism

If holism were the only form of coherentism, the contamination and fragility problems would be here to stay. Luckily for the coherentist, it isn't, and they aren't. The worst consequences of holism disappear when coherence among grounds and grounded things is widespread, but not absolutely ubiquitous: not everything grounds everything else. On another version of coherentism, there is more than one network of coherent grounding.[30] There is no grounding between different classes of facts, but maximal coherence within each class. Call this view "Insularism".

> *Insularism*: For any x, there is some y such that y grounds x (and $x \neq y$) and some z such that x does not ground z (and $x \neq z$). For any w and any s such that w grounds s, s grounds w.[31]

Here's a diagram of an insularist structure WI. As before, circles and arrows represent facts and partial grounding relations, respectively.[32]



An insularist world "WI"

In WI, each fact both grounds and is grounded by six other facts—but not *all* other facts. A is grounded by each of B–G (and they by it), but there are no grounding connections between the insular A–G and H–P. Call each of the interconnected

[30] According to some, a view without absolute ubiquity is really a "hybrid" between coherentism and some other view. See footnote 21.

[31] To clarify: the variables w and s range over the same facts as do x and y. The second sentence of this definition only states that all grounding relations are symmetric. Note that the first condition, that nothing is ungrounded, is universal—together with the symmetry of all grounding relations asserted by the second sentence, it implies that everything grounds something else.

[32] As was the case for holism, there will be far more than fourteen facts in an insularist world, so WI must represent only a part of an insularist world. See footnote 19. As we'll soon see, this feature of facts creates a unique problem for insularism.

structures which collectively make up an insularist world an "island". If insularism is true, any fact participates in grounding each other fact with which it shares an island, but does not participate in grounding any facts from other islands.

Insularism avoids the contamination problem. An insularist may deny grounding between contaminating and non-contaminating facts. For example, if all the subjective facts constitute one island, and the objective facts constitute another, discontinuous with it, not all facts are subjective.

Insularist worlds are not fragile like holist worlds. Although (given the standard assumptions about ground) each island may accommodate only facts of the same modal profile, it's not the case that the entire world couldn't get along without any single fact. Within any island, any individual fact depends on all the other facts. But each island is independent of the others. For example, if, in WI, C were to fail to obtain, A–G would be threatened, but H–P would not. Depending on how the different islands are separated from each other, this kind of fragility precisely respects standard intuitions.

A world with small insular islands reduces the incredible number of grounding relations posited by holism. An insularist might carve her world in many plausible ways. She might prefer maximal interdependence among all and only the facts about *concreta*, and, likewise, among all and only the facts about *abstracta*, yielding a bifurcated world like WI. Or, to give her world a distinctively Early Modern flavor, she might group together all the mind-independent facts, and add additional separate islands for mind-dependent facts associated with each individual mind. At the limit, insularism carves reality into a multitude of mutually grounding pairs—perhaps pairs of existential facts about quantities of matter and forms.[33]

But neither insularism nor holism can accommodate widely-endorsed paradigm cases of grounding. For many, grounding is appealing because it solves metaphysical problems through characteristically asymmetric relations. But these asymmetric relations are inconsistent with both holism and insularism.

An appealing moderate naturalism in ethics, aesthetics, or philosophy of mind strives for balance. Non-natural values, virtues, intentions, and their ilk, are treated with an empirically-minded suspicion, but not wholesale eliminativism. The balance is achieved with a metaphysical thesis: what is natural produces, gives rise to, or generates what is non-natural. This same thesis accounts for uniquely metaphysical explanations of the non-natural by the natural.[34] All this is neatly bound up in the claim: the natural grounds the non-natural (and *not vice versa*). Moderate naturalist views are, for many, the principal advantage of positing a grounding relation.

But moderate naturalism is inconsistent with both holism and insularism. Neither view can assert the interesting natural/non-natural asymmetry, and others like it. If holism is true, natural facts ground non-natural facts, but non-natural facts also

[33] Morganti (2019b, 16–19) suggests parallels between hylomorphism and coherentism. Note that, if one opts for a version of coherentism on which grounding is possibly reflexive, a maximally disconnected version of insularism is available, on which any fact grounds only itself.

[34] Kim (1994) is a classic case of cashing out moderate naturalism about the mind in terms of explanation. Cf. Dasgupta (2014)

ground natural facts. If insularism is true, there are two possible relations between natural and non-natural. If both obtain within the same island, the insularist's analysis will be the same as the holist's: the interesting asymmetries do not obtain. If they obtain within different islands, the natural doesn't ground the non-natural. Holists and insularists may try to accommodate moderate naturalist intuitions by cashing out the latter view without grounding.[35] But moderate naturalism is a clear paradigm instance of grounding, and the ability to articulate it counts as a reason to buy into the grounding framework. Holism and insularism both require a surprising revision of the notion of metaphysical explanation which some may find unappealing.[36]

Since insularism avoids some of holism's stranger consequences—the absolute ubiquity of grounding relations, contamination, and fragility—and is no worse off with respect to the asymmetry problem, are there reasons for the coherentist to prefer holism to insularism?

In short: yes. Insularism is threatened with collapse into holism. Note (as I have in footnotes 19 and 32) that any one fact implies an explosion of other facts. For example, if [A], [B], [J], and [K] are facts, then so are [A ∧ B], [J ∨ Q], [A ∧ [J ∨ Q]] and so on. These, in turn, produce more facts *ad infinitum*. Any ontology consisting of facts which does not in some way restrict how these facts can recombine to form new facts—whether that ontology is coherentist or not—will contain multitudes. An ontology which includes grounding relations among facts will include an exploding multitude of these, as well. On the other hand, if restrictions on the recombination of facts are acceptable—for example, if one may simply deny, for instance, disjunctive or conjunctive facts—then insularism may avail itself of this response. In other words, the insularist must maintain not only that certain groups of facts may ground each other, but also that certain combinations of facts—facts which hail from discrete islands—may not be freely recombined. Insofar as insularism is distinguished from holism on the basis that it posits groups of facts which are wholly unrelated by grounding relations, the very tenability of the view depends on some compelling way of supporting this claim that certain facts simply cannot be combined.

Consider a hypothetical insularist world consisting of two islands—one for *concreta*, the other for *abstracta*. The world contains the fact [Biden is the US President], which both grounds and is grounded by all the other concrete facts, and none

[35] That is, a holist or insularist might claim that, although natural facts don't asymmetrically ground, they nonetheless cause, build, or otherwise produce non-natural facts. Wilson (2018) calls grounding a species of causation, and both Schaffer (2016) Schaffer (2017) and Bennett (2017) allege significant parallels between the two relations. For an overview, see Wang (2020).

[36] This is a special case of the earlier incredulity problem which afflicted holism: it demands a special revision of our received metaphysical picture. Holists must revise that picture by maintaining that there are *many* (indeed, as many as there can possibly be) more grounding relations than we normally posit, because they believe in ubiquitous symmetric grounding. Insularists must revise that picture with respect to asymmetric grounding relations in particular, because they believe in non-ubiquitous symmetric grounding. They may do so in one of two different ways. They may opt for the "large-island" option, which revises what we considered to be asymmetric grounding relations to symmetric relations (the *relata* landing within the same island). Or, they may opt for the "small-island" option, which revises those same asymmetric grounding relations to no relations at all (the purported *relata* landing in discontinuous islands).

of the abstract facts. It also contains the fact [2+2=4], grounded and grounding all and only the abstract facts. But the world must also contain the conjunction: [Biden is the US President and 2+2=4]. That conjunction is doomed to do the impossible: to straddle the abstract-concrete divide. Like any conjunction, it must be grounded by its several conjuncts. But each conjunct is part of a different island. In which island, then, does the conjunction sit? It cannot be grounded by one, but not the other of its conjuncts—and rightly so, because it seems like it is neither wholly abstract, nor wholly concrete. Nor can it be grounded by *neither*, constituting its own, separate island. If the conjunction is permitted "one foot on each island", so, too, must be connections of mutual grounding across islands. But, then, given the first thesis of insularism—that anytime x grounds y, y will ground x—islands will merge together across any "bridge". Since there may be conjunctions of any pair of facts, any pair of islands may be linked by a bridge. Since any bridge-linked islands are actually one island, there is just one single island, not many, in any insularist world, after all. But, if that's the case, the second criterion of insularism is false. Instead, holism is true: everything participates in grounding everything else.

Responses are available, but costly. First, the insularist may reject the fact ontology in favor of the thing ontology. Barring certain controversial views on composition, there isn't a further thing for any two things or more.[37] Unlike facts, things don't explode: there are no "conjunctive entities" composed of things which participate in different islands, and a thing-ontology might avoid the insularist's collapse problem.[38] Second, she may restrict her view to atomic facts. That is, she may claim that only facts which are neither disjunctions nor conjunctions constitute an insularist structure. If disjunctions and conjunctions are *not* grounded by their respective constituents, explosion is again averted. The downside, in this case, is that, by introducing this restriction, the insularist effectively gives up her claim to describe the whole of reality. Third, she may allege that non-atomic facts are only *asymmetrically* grounded by atomic facts, and do not, themselves, participate in any system of mutual grounding. Insularism is true only of facts at the lowest level of a grounding hierarchy. Asymmetric grounding allows the coherentist to avoid the asymmetry problem as well. But permitting it also amounts to abandoning insularism for a different variety of coherentism to which I now turn.

[37] Universalists about composition will disagree.

[38] I don't consider this answer promising because I think that the best arguments for coherentism (and against foundationalism) about ground have to do with the way grounding is supposed to explain, and how explanations tend to have coherent, symmetric, or mutually-supporting structural features. But the cost of this response is that the natural *relata* of explanations are facts. To say that one thing explains another sounds like a category mistake, and, so, the way I understand grounding is inconsistent with things grounding each other (although facts about things certainly may do so). One may, of course, arrive at coherentism through a different route, which doesn't presuppose a close connection between grounding and explaining, and, therefore, is consistent with grounding among things. In that case, claiming that the *relata* of grounding are things only—or, at least, such that, unlike facts, they cannot be easily multiplied—might be a way to save insularism. Thanks to Byron Simmons for discussion on this point.

4 Hierarchism

As I've argued, holism and insularism cannot solve the asymmetry problem. But intuitive instances of grounding may be preserved while remaining true to the Coherentist Canon.[39] One possible way forward is to claim that there is only *some* mutual grounding, but that it doesn't affect the intuitive instances. Might a coherentist claim merely that there is *some* mutual grounding? Call a view committed to this claim alone "coherentism-lite":[40]

> *Coherentism-Lite*: There is some x and some y such that x grounds y and y grounds x (and $x \neq y$).

Coherentism-lite faces no asymmetry problem. Since it posits only that *some* things ground each other, it permits one-way grounding as well. It may well turn out to be an accurate representation of the world. In fact, since it has fewer commitments than any of the views considered so far—only *some* mutual grounding *somewhere*—it seems like, all other things being equal, it might be the most likely to be true. Insofar as compatibility with many possible substantive metaphysical positions is a virtue for a theory of overall structure, this seems to speak in favor of coherentism-lite. What's more, since it is only committed to an existential claim, it would be far more simple to prove that coherentism-lite is true, in comparison to any of the rival positions: it would suffice to identify but *one* instance of mutual grounding.[41]

Someone interested in proving that *some* form of coherentism is true may be drawn to coherentism-lite as their preferred approach. However, this is not my goal in this paper. Rather, I am interested in the possibilities coherentism offers as an alternative to the other two views with which we began: foundationalism and infinitism. Any such alternative must be committed to both tenets of the the Coherentist Canon, which states that there is a further grounds for anything, and some things ground each other. Although coherentism-lite is implied by the Canon, it is also consistent with denying the Canon's first thesis: a foundationalist might, for example, be a coherentist-lite, by positing mutual grounding among purely derivative things, while retaining her standard commitment to fundamental things. More abstractly, I call this view only coherentism-*lite*, rather than a genuine variety of coherentism, because, on its own, it does not answer our guiding question: it doesn't specify the overall structure of grounding relations. *Some* mutual grounding—all that coherentism-lite is committed to—is consistent with foundations and infinite descent alike.

[39] As was the case with insularism, some will be inclined to call the views described here as coherentist hybrids, rather than pure coherentism. See footnotes 21 and 30. Although I call hierarchism and rebarism varieties of coherentism, not hybrids, nothing hangs on this terminology.

[40] Bliss (2011, 187–188) calls this view "weak coherence". It is contrasted with "strong coherence" (2011, 188–189), which is equivalent to holism. Of course, holism and insularism both entail (and are consistent with) coherentism-lite—if everything grounds everything, some pair of things grounds each other!

[41] In effect, arguments for mutual grounding like those of Rodriguez-Pereyra (2015), Nolan (2018), or Barnes (2018) count as *bona fide* arguments for coherentism-lite.

In addition to adhering fully to the Canon, coherentism should aim to provide an original account of the whole of reality to rival foundationalism or infinitism. So, a kind of coherentism which can solve the asymmetry problem must commit to more than merely asserting some local interdependence, as coherentism-lite does. It must assert that mutual grounding obtains, somehow, *where it counts*, or that, *at bottom*, there are no ungrounded things.

The coherentist seems trapped. As I've argued, to distinguish coherentism from mere coherentism-lite, we must discern whether the view merely posits coherence among the derivative things. But, for many, discerning the derivative from the fundamental is just discerning that which is grounded from that which is ungrounded. In other words, many maintain that to be fundamental just is to be ungrounded. Coherentism rejects any ungrounded things. So, how can it distinguish fundamental from derivative?[42]

The popular definition analyzes fundamentality as ungroundedness. Call this "fundamentality-u".[43]

Fundamental-u: a fact x is fundamental-u if, and only if, x is ungrounded.

But another plausible definition describes the fundamental things not necessarily as ungrounded, but as indispensable.[44] We widely agree on a rough, intuitive sense of the fundamental facts as those which serve as the basic constituents for the possibility of all else, or as the bare minimum which God must have created when He created the world, or which a perfectly concise yet complete description of the world cannot do without. Non-fundamental facts, in contrast, are not preconditions for everything else, or came about as "free" byproducts at the creation of the world, or may be omitted from complete descriptions for conciseness' sake. In this sense, fundamental facts are indispensable if they are those facts without which the facts about the rest of the world would not be as they are.

In what kinds of grounding relations do facts which are fundamental in this sense stand? In other words, how might we understand "indispensability" in terms of grounding? Clearly, indispensability alone does not imply that each individual indispensable thing is entirely independent of all others or entirely ungrounded.[45] Rather, it suggests that the fundamental cannot be dispensed with (at any rate, not without thereby also dispensing with other facts, too). But such indispensability remains consistent with indispensable facts having grounds, so long as those grounds are *equally* indispensable. In other words, if it is conceived of as indispensability, fundamentality does not entail that the fundamental facts have no grounds *whatsoever*.

[42] Thompson (2020, 268) considers coherentism's inability to account for the concept of fundamentality a "fairly severe cost". But, in fn.18, she suggests that coherentist structures with many equally fundamental elements might offer a way out.

[43] For example, Fine (2001), Schaffer (2010), or Bennett (2017).

[44] A view like this one is defended by Raven (2016). This definition seems more in line with the Oxford English Dictionary's definition of fundamental as "serving as a basis or foundation; (hence) forming an essential or indispensable part". Thanks to Byron Simmons for this pointer.

[45] As I will soon argue, that any indispensable fact is ungrounded *does* seem to follow if we assume that things may not ground each other.

Rather, it entails that the fundamental facts have no grounds *which are not themselves grounded by those same fundamental facts*. Certain facts may be indispensable to each other, and fundamental facts may require certain other fundamental facts. Facts which are thus caught up in mutual indispensability are distinguished from non-fundamental—dispensable—facts in that the latter, but not the former, have grounds to which they themselves make no contribution. But the fundamental things are grounded only by things which they, themselves, participate in grounding. Call this "fundamentality-i".

> *Fundamental-i*: a fact x is fundamental-i if, and only if, x is indispensable. That is, for any y such that y is among x's partial grounds, x is among y's partial grounds.

In other words, even if x is not ungrounded, it is fundamental so long it is *itself* among the grounds of whatever grounds it. x is indispensable because we cannot do without it: without x as y's partial grounds, something crucial about the explanation for y is left out. Anything which is among the grounds of *its own* partial grounds cannot be omitted from a complete story of the world, because such an omission would leave some part of the world unexplained or unaccounted for.[46] By contrast, the omission or the failure to obtain of facts which are non-fundamental-i—dispensable facts—would not produce analogous mysteries: in their absence, the complete metaphysical account of reality would be provided by other facts. Or, God must have created those things which are among their own partial grounds, for those things could not have come "free" with the things which ground them.

Note, interestingly, that everything fundamental-u is also fundamental-i. But not everything fundamental-i is fundamental-u. Consider your favorite (candidate) ungrounded fact and call it "F". Suppose that F is ungrounded: there is absolutley nothing in virtue of which F obtains, and no metaphysical explanation for F. By that token, F is fundamental-u. But F is also fundamental-i. Since F has exactly no partial grounds, it is vacuously true that F is a partial grounds for any y which is F's partial ground. This is also in line with the intuitive sense of fundamentality-i: no complete account of the world may omit F.

Now, consider your favorite pair of mutually grounding facts (which are not grounded by anything apart from each other) and call them "G" and "H". Neither G nor H is fundamental-u. But both are fundamental-i: G is itself a partial grounds for its own partial ground (H), and vice versa. In other words, G and H are both indispensable for telling the complete grounding story of the world—without both G and H, certain facts would remain unexplained and unaccounted for.[47]

[46] It is unclear whether completely isolated facts—facts which stand in no grounding relations at all—are to count as fundamental-i. Of course, if coherentism is true, there are no such facts, because, according to the Coherentist Cannon, there is a further grounds for any fact. The closest that a coherentist may come to isolated facts are pairs of mutually grounding facts (perhaps as suggested by Morganti (2019b, 16–19)). In this case, both members of any pair are fundamental-i because, without either, its "partner" could not have been, or, at least, the complete story of it will not have been told.

[47] This discussion suggests that fundamentality-i, not fundamentality-u, tracks the core concept of "fundamentality", once that concept is stripped of the assumption that certain things are ungrounded. Funda-

Fundamentality-i is plausible and consistent with coherentism. It allows the coherentist to account for relative fundamentality among facts in terms of what grounds what. Facts are fundamental-i if they are indispensable, and derivative-i if they are asymmetrically grounded by the fundamental-i facts. A fact x is relatively more fundamental-i than another fact y if x is grounded more directly by the fundamental-i things than y is. So, genuine coherentism with local asymmetry can be distinguished from coherentism-lite as follows: genuine coherentism places webs of mutual grounding at the fundamental level, while coherentism-lite is consistent with such webs obtaining only at derivative levels.[48] This means that, by the lights of fundamentality-i, both holism and insularism claim that absolutely everything is fundamental. This is somewhat surprising, but probably not unwelcome for holists and insularists. Both views are extensively revisionary: they posit massive and unexpected interdependence and reject paradigm cases of asymmetric grounding. Both are motivated by a wholesale rejection of the traditional layered metaphysical picture. It is only fitting that both claim that everything is equally fundamental: that claim amounts effectively to rejecting the concept of fundamentality as any useful means of describing reality. Just as a game in which "*everybody* is a winner" appeals to those unsympathetic to the notion of winning and losing in general, a metaphysician skeptical of metaphysical hierarchies may be led to affirm that *everything* is fundamental.[49]

Fundamentality-i permits us to define a variety of coherentism which avoids the asymmetry problem. It posits asymmetric grounding *between* different "levels" of reality, and retains extensive mutual grounding *within* levels. If we imagine the insularist world, and add that the islands asymmetrically ground each other, we arrive at the view I'll call "hierarchism". Insularist worlds were made up of "islands": sets of facts which are maximally mutually interconnected, but not at all connected to other sets. Hierarchist worlds are made up of what I'll call "levels": sets of facts which are maximally mutually interconnected, but which are only asymmetrically grounded by other levels. This view retains the familiar layered conception of reality. However, it maintains widespread mutual grounding.

> *Hierarchism*: For any *x*, there are some *y*'s such that each of the *y*'s grounds *x* and *x* grounds each of the *y*'s, and *either* (i) there are some *z*'s (distinct from the *y*'s) such that each of the *z*'s grounds all the other *z*'s, and the *z*'s ground the *y*'s, *or* (ii) there are some *w*'s (distinct from the *y*'s) such that each of the *w*'s grounds all the other *w*'s, and the *y*'s ground the *w*'s.

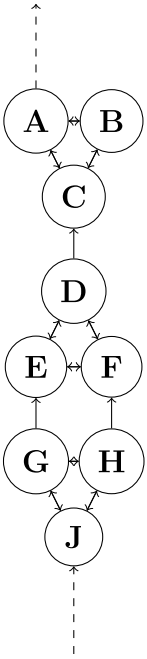
Footnote 47 (continued)
mentality-u describes that same concept, given the assumption that there are ungrounded things and no mutual grounding.

[48] Calosi and Morganti (2021, 8) also characterize genuine coherentism as more than mere mutual grounding. According to them, a coherentist posits mutual grounding among the "essential" facts.

[49] A certain brand of holist might be opposed to the characterization of her view as including *any* fundamental entities—let alone universal fundamentality! I sympathize with this worry, and suggest that the robust kind of fundamentality turns really on the fact that some things are *non*-fundamental. So, sure, everything in the holist world is fundamental. But only in a really trivial sense. Thanks to Ricki Bliss for pressing me on this point.

In other words, any fact is part of a web of mutual grounding with some other facts—a level. According to the basic form of hierarchism defined above, any level has got either (i) a level *below it* or (ii) a level *above it*.[50]

Here's a diagram of nine facts which constitute part of a simple hierarchist world.



A hierarchist world "WE"[51]

In *WE*, there are (at least) three distinct, three-membered levels: ABC, DEF, and GHJ. [51]Within each level, there is universal mutual grounding, as is the case for each island in the insularist *WI*. However, *WE* differs from *WI* because of the asymmetric connections between webs. Here, for instance, although C stands in symmetric grounding relations to A and B, it is asymmetrically grounded by D. In this sense, it is clear that D, E, and F are more fundamental than A, B, and C. D, E, and F are indispensable for telling the complete story of A, B, and C, because, based on the grounding relations which obtain between them, we would think that, without D, E, and F, A, B, and C would remain unexplained, unaccounted for, or in some other way mysterious. One trio is indispensable to the other in providing the reasons why the first turned out the way that it did. The reverse is not true: D, E, and F can get

[50] Of course, unless there are but two levels, this disjunction is not exclusive.

[51] Certain grounding relations have been omitted to make WE more legible. Technically, each of DEF-grounds each of ABC, and each of GHJ grounds each of DEF.

along just as well without A, B, and C. In turn, D, E, and F are grounded asymmetrically by G, H, and J—so these latter three are more fundamental than the former.[52]

As indicated by the two dotted lines pointing "up" from A and to J, hierarchism is consistent with a hierarchy of levels open on both ends. Those who prefer hierarchism with built-in infinite descent may turn to:

> *Hierarchism-i*: For any *x*, there are some *y*'s such that each of the *y*'s grounds *x* and *x* grounds each of the *y*'s, and *both* (i) there are some *z*'s (distinct from the *y*'s) such that each of the *z*'s grounds all the other *z*'s, and the *z*'s ground the *y*'s, *and* (ii) there are some *w*'s (distinct from the *y*'s and the *z*'s) such that each of the *w*'s grounds all the other *w*'s, and the *y*'s ground the *w*'s.

WE above represents hierarchism-i so long as both dotted lines indeed connect to further levels. Hierarchism-i features a doubly-open infinite sequence—infinite descent and ascent of levels in the grounding hierarchy.[53] However, by combining infinite descent of levels with mutual grounding within levels, hierarchism-i seems to capture two features which fans of grounding aim to avoid. The most natural route to infinitism, as far as I can tell, is an aversion to absolute foundations, but an even stronger aversion to loops. In other words, an infinitist demands a further explanation for any given fact, but also insists that such an explanation must always be new, and never permit any fact to contribute to its own metaphysical explanation. Since hierarchism-i has already given up on that second demand, it's not clear what advantage adding an infinite downward sequence of levels of ground adds. Since basic hierarchism already features some circularity, it is difficult to see why one would be moved to supplement it with an infinite descent of levels described by hierarchism-i.

Those who wish to specifically rule out infinite descent from their hierarchism may, instead, turn to a foundationalist-inspired hierarchism-f:

> *Hierarchism-f*: For any *x*, there are some *y*'s such that each of the *y*'s grounds *x* and *x* grounds each of the *y*'s, and there are some *z*'s such that each of the *z*'s grounds all the other *z*'s, and the *z*'s ground the *y*'s (and *x*).

In other words, any fact is part of a web of mutual grounding (which constitutes a level in the hierarchy), and there is one level (the z's) which grounds all the other levels.[54] One may imagine *WE* as the lowest portion of a hierarchist-f world if one ignores the dotted arrow pointing up to fact J. If J is only grounded by G and H (each of which J also itself grounds), G, H and J are the fundamental level: each is indispensable to the others.

Hierarchism, and hierarchism-f in particular, resembles traditional layered metaphysical views. These accounts arrange what there is from the more derivative to

[52] Note that, like holism, hierarchism seems to be committed to a kind of grounding over-determination: each level is grounded by *all* of the levels below it, but each of *these* levels is, too, grounded by the levels below *it*. The issue of overdetermination in grounding structures is complex, but not very clearly devastating. See footnote 29 above.

[53] Some prominent defenses of grounding infinitism are Markosian (2007), Bohn (2009), Cotnoir (2013), Morganti (2014), Morganti (2015).

[54] x may, of course, be one of the fundamental z's, in which case the y's are identical to the z's

the more fundamental, at least between levels. Although both accounts invoke only fundamentality-i, permitting non-traditional mutual grounding *within* levels, So, they nonetheless afford the traditional asymmetric relations between levels: the contents of lower levels are indispensable to the contents of higher levels, but not *vice versa*. Moderate naturalism is a simple layered view: the natural facts lie below the non-natural facts in the overall hierarchy. We retain the insularist's commitment to an extensively interconnected universe, nonetheless segmented into different realms - the concrete, the abstract, the natural, the non-natural, and so on.

Recall insularism's explosion and collapse problem: the view is threatened by compound facts—conjunctions or disjunctions—whose constituents hail from discrete islands. The hierarchist is free to say that compound facts are grounded asymmetrically by their constituents, and, so, faces no such problem. If [A] and [B] are facts from levels n and $n + 1$, respectively, the hierarchist may call [A $\wedge$ B] a more derivative fact, sitting at a level above $n + 1$—perhaps in a symmetric grounding dyad with [B $\wedge$ A]—grounded by facts from both n and $n + 1$. Whereas an insularist can't find a home for mixed facts, the hierarchist has plenty of free real estate for them "up above"!

Hierarchism has an interesting advantage over the orthodox layered view. The advantage is that it accounts for the unity of discrete levels of reality. The special sciences are an example of the kind of layered conception of reality preserved by hierarchism: the facts about physics explain the facts about chemistry, which explain the facts about biology, and so on. Philosophers of science debate the unity of science: are all scientific projects part of a single enterprise to discover a relatively unified set of laws? Or, rather, do they explore disparate and unique corners of a "dappled" world? The disagreement stems from a need to capture the tension between the discreteness and isolation of different scientific projects on the one hand, with the overall similarity of the sciences taken together on the other.

Although the standard debate concerns the epistemic or conceptual tools and methods of science, a metaphysical view which describes a nested hierarchy of what there is analogous to the nested hierarchy of scientific pursuits will face a similar issue. Just as philosophers of science seek an account of what, if anything, makes for a discrete special science like chemistry, a metaphysician who posits an ontological "level" of chemistry will, likewise, have to provide a description of where the unity of the level comes from. Hierarchism provides a clear answer: a level is that group of things which exhibit a high degree of mutual explicability or mutual grounding.[55]

[55] Of course, it may be that the best science will not support any of the explicability described here, and posit exclusively asymmetric relations between levels. Again, my goal in articulating the varieties of coherentism is not to capture the *single* variety which stands the best chance of accurately representing reality. Rather, I am interested in presenting a range of varieties, and showcasing the potential theoretical advantages of each as a potential tool to be used in future theorizing, regardless of what the best evidence turns out to show.

5 Rebarism

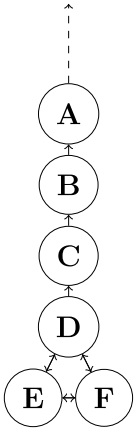
Our fourth variety of coherentism is closest to orthodox foundationalism. On this view, there is only *one* coherent level: the *fundamental* level. All else stands in asymmetric grounding relations, generating a familiar layered metaphysical picture.

A word on metaphors. Descartes wanted an epistemic edifice on stable bedrock. On the other hand, Neurath's ship and Quine's web both demanded *integrity*, not *stability* from a well-built set of beliefs. Both virtues are embodied by a wonder of modern engineering: the reinforcing steel bar, or rebar. A skyscraper's foundation can sustain millions of tons not just because it's solid and sturdy, but also because of the high tensile strength of the densely interwoven net of metal rebar embedded within. I turn to rebar to represent metaphysical coherentism which posits a web of mutual grounding at the fundamental level. The derivative things are supported asymmetrically by the fundamental things—as each floor of a building supports the one above it—but the fundamental things symmetrically support each other—as the interwoven rebar holds the foundation together. Hence the name.[56]

> *Rebarism*: For any x, the following *exclusive* disjunction is true: *either* (i) there are some y's such that each of the y's grounds x and x grounds each of the y's, or (ii) there are some z's such that each of the z's grounds all the other z's, and the z's ground x.

In other words, any fact is either (i) part of a web of mutual grounding or (ii) grounded by such a web (but not both). Here's a simple rebarist structure.

[56] Epistemic analogues to rebarism are described by Haack (1993) Hansson and Olsson (1999), and Hansson (2006). For Haack, "found-herentism" (which she calls a foundationalist-coherentist hybrid) is the only way to avoid problems associated with either traditional epistemic picture. Hansson argues that coherentists "have to accept a weak version of epistemic priority, that sorts out merely derived beliefs" (2006, 14). That is, the best version of epistemic coherentism posits mutual support among the non-derived beliefs only, but not among the beliefs which are derived from them. Hansson and Olsson's arguments for coherentism about the non-derived beliefs have to do primarily with how beliefs are revised. Since coherentism of the metaphysical kind does not make provisions for changes, their arguments do not carry over to the present context, despite the similarity of their conclusion.



A rebar world "WR"

In *WR*, there is exactly one, three-membered level in which mutual grounding obtains.[57] That level consists of D, E, and F. On the rest of the diagram, you see only asymmetric arrows: C grounds B, and B grounds A, but, in both cases, not *vice versa*. As indicated by the dotted arrow pointing "up" from A, a rebarist world may contain an infinite *ascent* of grounds. However, it cannot contain an infinite *descent* below D, E, and F. D, E, and F—and the mutual grounding relations in which they stand—support the hierarchy above them, but are not themselves supported from below.

Rebarism is the most conciliatory form of coherentism. Indeed, subtracting any coherence from rebarism entails foundationalism! As such, rebarism won't satisfy vehement deniers of foundations, linearity, and hierarchy.

Like hierarchism, rebarism avoids the problems of incredulity, contamination, fragility, asymmetry, and mixed facts faced by holism and insularism. Rebarism has one advantage over hierarchism: it accounts for the uniqueness of the fundamental level. Hierarchism-f, the only form of hierarchism which posits something like a fundamental level, leaves one question unanswered. What intrinsic features of the fundamental level account for its fundamentality? A criticism which foundationalists must address—which I won't recapitulate extensively here—is the challege of providing a satisfying response to this question.[58] Fundamental facts, supposedly

[57] One might distinguish between *monist* and *pluralist* rebarism as follows. According to the rebar-monist, there is *but one* interdependent web at the fundamental level, such that any fundamental thing partially grounds any other fundamental thing. According to the rebar-pluralist, there are *many* discrete fundamental interdependent webs, such that any fundamental thing partially grounds and is grounded by some, but not all, other fundamental things. Both views seem like viable forms of coherentism. I intend my remarks here to apply equally to both rebar-monism and rebar-pluralism.

[58] For criticisms of foundations as the termini of explanations, see, for example, Nolan (2018), Bohn (2009), Bliss (2013; 2014; 2019), Thompson (2018), Trogdon (2018), or Amijee (2020).

unexplained explanations, offer "no natural resting place for thought,"[59] and contradict a "powerful intuition—namely, that everything is explained, that nothing comes to be *ex nihilo*."[60] Not only do we seem to find no examples of facts exempt from that intuition. The history of discovery provides ample reason to be skeptical of foundationalism, at least concerning concrete particulars: scientific progress consists of delving ever deeper into the nature of reality, as time and again we have abandoned putative "ultimate" descriptions—for example, in terms of physicists' molecules, atoms, or hadrons. It would be arbitrary to claim that the sequence of grounds ends at any particular point, if nothing makes that point unique apart from the fact that it is fundamental. But hierarchism-f, like foundationalism, is committed to such a position.

In response to Dasgupta's extended metaphor, anti-foundationalists maintain that there is no individual fact which is "not apt to be grounded", just as no individual fact seems apt to naturally put an end to a curious child's line of questioning: "Yes, but why is the world like *that*?"[61] But a form for such satisfactory explanations, or a "natural resting place for thought" seems to be suggested by the connection between explanation, understanding, and coherence. Some epistemologists allege there to be a clear conecptual connection between understanding and "what internalist coherence theories say about justification."[62] Then, rebarism can account for the uniqueness of the fundamental level as the one level at which demands for further explanations terminate. It is only once one reaches that level that one may understand, because only at that level do explanations constitute a coherent, mutually supporting system in which facts may participate in grounding and explaining each other.

6 Conclusion

I've presented four varieties of metaphysical coherentism. All facts might make up an all-encompassing system of mutual grounding (holism), or they might be broken up into many discontinuous systems (insularism). Or coherent grounding might occur within a hierarchy of asymmetrically dependent levels (hierarchism), or just a single level (rebarism). I began with the most revisionary view. Then, I showed how it can avoid its most controversial commitments while retaining the Coherentist Canon: mutual grounding and no foundations. This paper's survey demonstrates that doctrine's versatility. It shows how initial skepticism about radical coherentist commitments shouldn't deter us from articulating a more nuanced view. We need not throw out the baby with the bathwater.

From the outset of this paper, I've bracketed discussing arguments for coherentism. I suspect that one's preference among these arguments will bear on one's

[59] Bohn (2018, 178), For this quote, Bohn credits personal communication with Ralph Henk Vaags.

[60] Bennett (2017, 122).

[61] See Dasgupta (2016), especially pages 382–383. Compare Dasgupta's "bad answers" to Fine's "not completely satisfactory explanations" offered in the absence of foundations (2010, 105).

[62] Kvanvig (2003, 188). Recall the broadly coherence-based accounts of understanding from footnote 13.

preference for variety of coherentism. Those drawn to coherentism primarily through a belief in extensive, world-wide interdependence will tend towards holism. Coherentists skeptical of ontological hierarchies may prefer insularism. Those who find in coherentism the most plausible model for how metaphysical explanations produce understanding will have to respect certain intuitions about asymmetric explanations, and choose among hierarchism or rebarism. Those who like coherentism solely because of a distaste for foundations as described by orthodox foundationalism may be satisfied with rebarism.

Coherentism is also consistent with a range of other metaphysical views beyond those I've presented. For example, "insular rebarism" posits many discrete interdependent webs, exclusively at the fundamental level. Or, a kind of "super-hierarchism" might posit many interdependent webs at many different levels of reality. The possibilities for blending and cross-pollinating the varieties of coherentism are extensive.

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