

METAPHYSICAL FOUNDATIONALISM: CONSENSUS AND CONTROVERSY

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ABSTRACT

There has been an explosion of interest in the metaphysics of fundamentality in recent decades. The consensus view, called metaphysical foundationalism, maintains that there is something absolutely fundamental in reality upon which everything else depends. However, a number of thinkers have challenged the arguments in favor of foundationalism and have proposed competing non-foundationalist ontologies. This paper provides a systematic and critical introduction to metaphysical foundationalism in the current literature and argues that its relation to ontological dependence and substance should be qualified in important ways.

Metaphysical foundationalism is the view that there is something absolutely fundamental in reality upon which everything else depends. How we understand this view will depend, in part, upon our understanding of fundamentality and the role that philosophers adopt for foundationalism in their ontology. Currently, the question of whether foundationalism is true or not most often comes down to whether infinite descent of ground is possible.¹ However, this paper will explore other approaches to foundationalism as well. The goal of this paper, then, is to provide a systematic and critical introduction to the various approaches to metaphysical foundationalism in the current literature and its relation to fundamentality.

In section one, I discuss the relationship between metaphysical foundationalism and substance, as well as contemporary approaches to fundamentality. In section two, I discuss various strategies for arguing in favor of metaphysical foundationalism and

objections. In section three, I discuss some of the candidates that could serve as a metaphysical foundation and further discuss the relationship between substance and foundationalism. In section four, I discuss two non-foundationalist ontologies: metaphysical coherentism and infinitism.

I. METAPHYSICAL FOUNDATIONALISM AND FUNDAMENTALITY

Currently, there is no single agreed-upon definition of metaphysical foundationalism. However, there is a general consensus that foundationalism involves a commitment to a) something absolutely fundamental and, b) the fundamental being complete or responsible for everything else. How the fundamental is responsible for everything else is typically cashed out in terms of a theoretical notion that is used to link the fundamental to the non-fundamental. The most popular tool today for making that link is ground (see section 1.2 below).²

Consider the following four definitions of metaphysical foundationalism offered in the literature.

- (1) Metaphysical foundationalism is the view that necessarily, any non-fundamental entity is fully grounded by fundamental entities.³
- (2) Metaphysical foundationalism is the view that there have to be some things that are absolutely fundamental—dependent on nothing—on which all else ultimately depends.⁴
- (3) Metaphysical foundationalism is the view that grounding relations form a well-founded partial ordering. In other words, there can be no limitless chains of dependence (*metaphysical infinitism*) and no circular dependence (*metaphysical coherentism*).⁵
- (4) Metaphysical foundationalism is the view that reality has a foundation—that there is a fundamental level, in a sense that needs to be specified.⁶

We can see the two requirements above operative in each of these definitions and the emphasis on grounding and dependence, which are often used synonymously. Understanding and characterizing the link between the fundamental and non-fundamental is a major facet of the metaphysics of fundamentality, but one which I will not address further here.

1.1 *Metaphysical Foundationalism and*

Substance: An Important Qualification

Substance is a key notion in the history of Western thought that is most closely associated with fundamentality. It is a philosophical term of art for those entities which exist in some sort of ontologically privileged way. This ontological privilege is often cashed out in terms of *ontological independence*. On this view, if *x* depends upon nothing else for its existence or nature, then *x* is a substance.⁷ Metaphysical foundationalism, as a philosophical thesis, can be seen as a continuation of the longstanding discussion in Western thought regarding substance. But

the connection between substance and metaphysical foundationalism must be qualified.

Occasionally, foundationalists use the term “substance” to refer to the fundamental.⁸ But proponents of foundationalism must be careful to keep in mind that the term “substance” has different connotations depending on the role that it plays in a given ontology. As Kathrin Koslicki (2018) points out, a *comparative* notion of substance corresponds to a comparative ranking of entities as more or less deserving of substancehood.⁹ This comparative notion is a marker of *relative* fundamentality and is not to be confused with an *absolute* notion of fundamentality or substance *simpliciter*. Some things can be fundamental in a relative sense even though they may not be fundamental absolutely speaking. It is, therefore, vital to keep in mind that metaphysical foundationalism is a thesis regarding *absolute* fundamentality, rather than *relative* fundamentality.¹⁰

As a result of this important distinction, many thinkers choose to characterize the absolutely fundamental as “complete.” Completeness is the notion that only the fundamental entities are somehow responsible for everything else. Theodore Sider (2011) writes, “Completeness seems definitive of fundamentality. It would be a nonstarter to say that the fundamental consists solely of one electron: thus conceived the fundamental could not account for the vast complexity of the world we experience.”¹¹ Completeness has been interpreted in many ways.¹² But, generally speaking, it is taken to *characterize*, rather than *define*, the absolutely fundamental and illustrates the important distinction between absolute and relative fundamentality nicely, since those things which are relatively fundamental are not complete.

1.2 *Contemporary Approaches to Fundamentality*

Today, one of the most popular approaches to fundamentality is the ground-theoretic

approach.¹³ Grounding is captured by the phrase “in virtue of,” and is typically conceived of as a non-causal asymmetric relation of determination and metaphysical explanation which holds between facts.¹⁴ Grounding theorists typically take the grounding relation to have the formal properties of asymmetry, transitivity, and irreflexivity, thus forming a strict partial order and inducing a hierarchical structure on reality. Building is a similar notion. According to Karen Bennett (2017), there are a number of building relations (grounding, composition, constitution, realization, among others) that form a reasonably natural resemblance class and allow us to understand how the larger is built up out of the smaller.¹⁵

What it is for x to be absolutely fundamental on both a grounding and building approach, is for x to be ungrounded or unbuilt. Similar to the Aristotelian conception of substance, this notion of fundamentality amounts to a kind of ontological *independence*. If x is ungrounded/unbuilt so that x does not depend on anything else, then x is independent and hence fundamental.

2. ARGUING FOR METAPHYSICAL FOUNDATIONALISM

2.1 *The Well-Foundedness of Grounding*

Given that grounding is the most popular approach to fundamentality, metaphysical foundationalism is typically understood in terms of a ground-theoretic framework. On this approach, metaphysical foundationalism is often cashed out in terms of the well-foundedness of grounding. A grounding chain is well-founded if the chain must eventually terminate in an entity or fact that is itself ungrounded, and hence, fundamental.¹⁶ But the well-foundedness of grounding is a controversial thesis. Why think that chains of grounding cannot go on indefinitely?

Jonathan Schaffer (2010a) has argued that where there is nothing fundamental: “being would be infinitely deferred, never

achieved.”¹⁷ Why? Because “[w]ith grounding one is looking at a transference of reality: the grounded entity exists in virtue of its grounds.”¹⁸ For Schaffer, when x grounds y , y *depends* for its nature and existence upon x .¹⁹ And if there is an infinite chain of grounding that instantiates this dependence relation among its members, Schaffer argues that the regress that results is vicious. He writes, “I think that a regress counts as vicious if and only if there is an endless chain of dependency with transference of the relevant status.”²⁰ The relevant status in this case is the existence or being of a grounded entity.

There have been a number of criticisms of Schaffer’s regress argument offered recently. Einar Bohn (2018a) and Ricki Bliss (2013) have argued that the regress in question is, in fact, not vicious. Bohn considers a number of ways in which a regress might be vicious, one of which involves reductive explanation. If F is grounded in G , and G explains F in a reductive manner, then G explains away F . So, if we have a case of indefinitely descending ground, every fact is explained away in terms of something that itself is explained away. As a result, every fact would be infinitely deferred.²¹ This does seem to constitute a genuinely vicious form of regress, according to Bohn.

However, Bohn maintains that this kind of regress does not apply to Schaffer’s grounding scenario and concludes that Schaffer’s regress is not vicious. Grounding, says Bohn, is not reductive in the above sense. Even if we wanted to motivate a vicious regress by maintaining that grounding is explanatorily reductive, Bohn thinks this would get things backwards. Either the ground has the same degree of being as the grounded or more. It cannot have less. But as we approach infinity, we either stay with the same degree of being or approach infinite being. If grounding is reductive, then we are explaining facts away in terms of other facts that have equal or more being. So, Bohn thinks we are faced

with a dilemma. The regress only works on a reductive understanding of grounding. But if grounding is reductive, then it works against Schaffer's intuition. If it is not reductive, then it does not support his intuition.

Bliss (2013) also argues that Schaffer's regress fails to meet a number of criteria by which a regress might be considered vicious. Bliss considers Schaffer's notion that a relation of dependence among the members of a grounding chain results in viciousness. In this kind of regress, there is a transfer of some kind of property, such as "being real." Bliss says, "The regress gets going because the phenomena invoked at each stage depend upon something else for said property . . ." ²² To help clarify this, Bliss considers the possibility that a regress must be terminated by a categorical property possessor. She considers the notion that unless there is something in the grounding chain that possesses the property under consideration categorically, then, nothing at all within the chain will possess the property. ²³ However, Bliss questions why we should assume that conditional property possession, that is, possession of a property in dependence upon something else, is an inferior mode of property possession to begin with.

Bliss goes on to consider that the function of a categorical property possessor is to explain how the whole grounding chain has the property in question in the first place. In an indefinitely descending grounding chain, each member's possession of a property is explained by the preceding member, but the chain as a whole has no explanation for its possession of the property in question. Scott Aiken (2005) makes a similar distinction between a mediate and global perspective. ²⁴ From the mediate perspective, each individual member of a regress is fully explained by the preceding member. But when we shift to the global perspective, no matter how long the chain goes on we will never arrive at an explanation for the chain *as a whole*. But if the

foundationalist makes this move, Bliss thinks she has done a bait and switch. For "[t]o claim that an infinite regress is vicious because it doesn't allow us to answer the global question is to have accused it of having failed to carry out a task it was not designed to complete," argues Bliss. ²⁵

Lastly, Karen Bennett (2017) has challenged Schaffer's notion of reality transference. Bennett analyses Schaffer's claim that if there are no independent entities, "being would be infinitely deferred, never achieved" and concludes that there is no convincing interpretation of the phrase. She considers the following interpretations.

- (1) "nothing would truly 'have being'—that is, nothing would be fully real, or exist in the strongest sense."

And,

- (2) "if building chains never terminate in independent entities, nothing would exist at all." ²⁶

Bennett finds both of these interpretations wanting. With regards to the first interpretation, she rejects the background assumption that only independent entities are fully real. Similarly, Bennett worries that the second interpretation relies on the assumption that only independent entities can build anything. If that is true and there are no independent entities, then it seems to follow that nothing would exist at all. But Bennett finds this assumption unconvincing and opts to remain agnostic regarding well-foundedness. As we can see, there seems to be a consensus emerging among some thinkers that foundationalism is difficult to argue for in any conclusive way.

2.2 *Primitivism*

Some thinkers take a different tack in arguing for foundationalism. Rather than offer explicit arguments in favor of the position, as Schaffer does, these thinkers take metaphysical foundationalism to be either a primitive theoretical posit unable to be characterized in

terms of other notions such as grounding or axiomatic in some sense. Jessica Wilson, like Kit Fine (2001), posits an absolutely fundamental level in order to account for the directionality of relative fundamentality relations. She writes, “Here I am inclined to follow Fine and ‘reject the idea that the absolute notion of fundamental reality is in need of a relational underpinning’, rather taking ‘reality and its intrinsic structure’ to be primitive . . . Which entities are in the fundamental base is primitive.”²⁷ In response to the criticism that there may be no absolutely fundamental level at all, Wilson bites the bullet and says, “everything would be on a par, priority-wise . . .”²⁸ There would be no relative fundamentality.

Similarly, Cameron (2008) thinks metaphysical foundationalism is a powerful intuition that carries real weight in metaphysical theorizing. But he thinks that it is difficult to offer a solid argument in its favor. In the end, Cameron opts for accepting foundationalism on the grounds of theoretical utility. He writes:

If we seek to explain some phenomenon, then, other things being equal, it is better to give the same explanation of each phenomenon than to give separate explanations of each phenomenon. A unified explanation of the phenomenon is a theoretical benefit. This seems to provide some evidence for the intuition under discussion.²⁹

Suppose we have an infinitely descending chain of ground. Everything in the chain that requires a metaphysical explanation of its existence may have one in virtue of each preceding member. But as Cameron puts it, “there is no collection of objects that explains the existence of every dependent *x*.”³⁰ Every dependent *x* is explained by some further thing, rather than the whole collection being explained by one thing or one set of things. This, Cameron thinks, is a theoretical cost.

However, Bliss criticizes this intuitionist approach by pointing out that the metaphysical foundationalist is offering a substantial thesis that requires justification. She writes,

“. . . metaphysical foundationalism is a substantive metaphysical thesis: it involves ontological commitments. Not only does it commit us to a grounding relation, amongst other things, but also to a realm of unexplained, ungrounded entities.”³¹ In response, Cameron and Wilson might point out that their posit does important theoretical work and that it is fairly standard practice to accept primitive notions if they can earn their keep.

2.3 *Ultimate Explanations*

Lastly, one might think foundationalism must be true due to considerations of explanatory adequacy. Where there are dependent entities, say, we can only explain this phenomenon with recourse to some entity or entities that themselves are not dependent and are, therefore, fundamental. The key focus here is on the requirement of some form of ultimate or complete explanation. For example, Kit Fine writes:

. . . there is still a plausible demand on ground or explanation that we are unable to evade. For given a truth that stands in need of explanation, one naturally supposes that it should have a completely satisfactory explanation, one that does not involve cycles and terminates in truths that do not stand in need of explanation.³²

Though Fine may not be intending this comment to endorse metaphysical foundationalism of the sort presently under discussion, the general sentiment he expresses here is typical of what foundationalists often think. The idea is that, without a foundation of some kind or other, we somehow have failed to offer a complete or ultimate explanation of some target phenomenon. To put it roughly, a complete or ultimate explanation is typically characterized as one that itself requires no further explanation, acting as a terminus for all other explanations, which is akin to the notion of foundationalism under consideration.

However, Bliss thinks that this demand for complete satisfactory explanations begs the question. She suggests that if the

foundationalist conceives of explanations as being completely satisfactory only when we arrive at the existence of something fundamental, i.e., something which does not stand in need of further explanation, then the foundationalist is begging the question so long as this appears as an assumption in an argument for something fundamental.³³

3. WHAT IS FOUNDATIONAL?

3.1 *Candidates*

Foundationalism is often associated with either end of the mereological scale, amounting to what Tuomas Tahko calls mereological fundamentality.

Mereological Fundamentality: The world is organized into mereological levels and there is a fundamental, mereologically independent level which is at one end of the mereological scale.³⁴

On this view, the world is structured by the mereological part/whole relation which is correlated with a relation of metaphysical priority (often thought to be grounding). The question, then, is which way does the relation of priority run? Is the whole dependent on the parts, as is typically thought, or are the parts dependent upon the whole? The former view amounts to a kind of atomism, called *priority pluralism*, where chains of priority “bottom out” in the many fundamental simples. The latter view amounts to *priority monism*, where chains of priority “top out” in the one cosmos as a whole.

On priority monism, the one cosmos as a whole is the one and only substance, i.e., the only *basic* concrete object.³⁵ For the priority monist, there are many things that exist (as proper parts of the cosmos), but only the cosmos itself, as a whole, deserves the status of substance.

Priority pluralism, on the other hand, takes there to be many fundamental objects, usually identified with atoms of some sort, i.e., mereological simples. However, the question of whether there are atoms in this sense

seems to be an empirical one and still open to question. Peter van Inwagen, in his influential book *Material Beings* (1990) held a commitment to some form of atomism.³⁶ But today, this view seems to be less popular.³⁷

For something to be fundamental in a mereological sense is for that entity to be mereologically *independent*. The metaphysical foundationalist will claim that reality cannot be proper parts “all the way down.” The foundationalist’s intuition in the mereological case stems from concerns of gunky worlds. A world is gunky if there are no simples (atoms), but every material object has proper parts. The worry, then, is that if a complex object is dependent upon its parts, and the world is gunky so that it is proper parts “all the way down,” it looks like we have another vicious regress on our hands. As Cameron writes:

In the composition case, the anti-gunk worry is that composition could never have got off the ground. If the existence of each complex objects depends for its existence on the existence of the complex objects at the level below, and if we never reach a bottom level, then it is hard to see why there are any complex objects at all.³⁸

Whether the world is, in fact, gunky or not, and whether gunk is possible or not, are questions we cannot answer here. Schaffer has argued that gunk is a real possibility. It is entirely conceivable that, as physics advances, there will be no discovery of a fundamental level of simple atoms, but simply limitless descent.³⁹ But if gunk is a real possibility, then we need some account of the existence of complex objects. Schaffer’s solution is that metaphysical priority must run from the part to the whole, so that the whole is prior to the part.

One complaint regarding mereological priority raised by Kathrin Koslicki is that the parthood relation is not itself a dependence relation. Jessica Wilson has argued against the grounding idiom by maintaining that small-g

grounding relations, such as parthood, composition, realization, and constitution, can do the job that grounding is intended to do.⁴⁰ Koslicki argues that Wilson is mistaken in taking these small-g grounding relations to themselves be dependence relations. Rather, Koslicki's view is that "these relations *induce* different varieties of metaphysical dependence in different circumstances and different respects."⁴¹ Koslicki also argues that relations like parthood can induce dependence relations that go in both directions, even if we posit an absolutely fundamental level in order to fix the direction of priority, as Wilson does.⁴²

There are also several relatively unexplored alternatives to priority monism and priority pluralism. Sara Bernstein (2021) has proposed "middle-ism" as a viable option, where instead of a top-level (priority monism) or a bottom-level (priority pluralism) being the most fundamental levels, "[a]n absolutely ontologically independent middle level is the most fundamental level."⁴³ The middle level, on Bernstein's conception, consists of "medium-sized dry goods" like iPhones, couches, and human beings. Bernstein suggests that grounding is bidirectional. The middle level grounds both upwardly and downwardly. Bernstein is not arguing that this middle-level view is true. Her argument is that it is possible since neither our definition of fundamentality nor understanding of grounding require either a topmost or bottommost level to be the most fundamental. However, if one accepts a pluralist approach to dependence, the middleist view might run into problems. See the next section, 3.2.

A fourth option is some form of theism, the view that God exists as the only absolutely fundamental entity upon which everything else depends. Deng (2020) has argued that there is a single ungrounded existent, *x*, and everything other than *x* is ultimately grounded in *x*, which resembles many traditional cosmological-style arguments.⁴⁴ Both

Schaffer and Deng arrive at one basic object (the cosmos for Schaffer, God for Deng).⁴⁵ But unlike Schaffer's argument, Deng's argument does not involve the controversial claims that a) the whole is prior to its parts and b) that the one basic object only grounds things that stand in the part-whole relation.⁴⁶ Things like abstract entities, numbers and sets are left out on Schaffer's view. In response to this last claim, Schaffer might point out that he takes a things-first approach on which concrete objects are prior to any other types of entities.⁴⁷

3.2 *Metaphysical Foundationalism and Substance: Another Important Qualification*

In addition to the distinction between absolute and comparative notions of substance in section 1.1, we must also consider the *role* that substance plays in a given ontology. Whether there are substances *simpliciter* does not necessarily entail that those substances act as a foundation for everything else. This is because *x* may indeed be absolutely fundamental, but only *relative* to some given notion of dependence. This, of course, requires that we be pluralists regarding ontological dependence—the idea that there are multiple dependence relations rather than just one. This pluralism would then entail multiple versions of foundationalism, a foundation for each kind of dependence that we think must be well-founded.⁴⁸

For example, there might be substances (things that exist in an absolutely fundamental way) with respect to identity dependence, say. But those substances, though they depend on nothing for their identity, may depend on other things in other ways. E.J. Lowe (1998) holds this view. Lowe takes substances to be certain concrete particular objects, such as Socrates, that do count as absolutely fundamental with respect to his specific notion of identity dependence.⁴⁹ For Lowe, a substance does not depend for its *identity* upon anything

other than itself.⁵⁰ Thus, Lowe argues that this notion of identity dependence (what he also calls strong existential dependence) must be well-founded. Where there is a chain of entities each depending on the next for their identity, this dependence must bottom-out eventually.⁵¹

But Lowe's substances, though they are substances *simpliciter*, are dependent in other respects. Lowe writes:

The fact that a substance is a "strongly" existentially independent entity does not prevent it from being "generically" existentially dependent upon many types of entity. For example, a composite substance—one that has proper parts which together compose it—generically depends for its existence upon such parts.⁵²

As such, Lowe's paradigmatic substances (certain concrete particular objects) are substances *simpliciter* in virtue of being ontologically independent relative to his notion of identity dependence. But they are also simultaneously dependent, since they depend upon their proper parts in a more generic sense of dependence. So, Lowe's composite substances, though absolutely fundamental, do not function as a foundation for everything else.⁵³

So, we must keep in mind that if we are pluralists regarding dependence, the well-foundedness of one notion of dependence may not necessarily lead to metaphysical foundationalism.⁵⁴ As we saw in Lowe's case, this would get us only to a *local* notion of foundationalism, i.e., a foundation indexed to only one notion of dependence, which would not serve as a foundation for everything. On the other hand, if we are not pluralists with regards to ontological dependence but take there to be only one privileged grounding relation, this problem does not arise.⁵⁵

4. ALTERNATIVES TO METAPHYSICAL FOUNDATIONALISM

There have been a number of accounts formulated against metaphysical founda-

tionalism. Directly, these accounts offer alternative ontologies that rival the foundationalist's. Indirectly, these alternatives serve as counterexamples to foundationalism. If a non-foundationalist ontology can be offered that is logically or metaphysically possible, then at the very least this gives us reason to think that foundationalism is not *necessarily* true.⁵⁶

4.1 Metaphysical Coherentism

Metaphysical coherentism is the view that chains of grounding can form loops or cycles. This view amounts to a denial of what Bliss calls the hierarchy thesis, namely, that reality displays a hierarchical structure ordered by the grounding relation understood as forming a strict partial order. Bliss notes a number of ways grounding loops can be formed. A loop can be formed by a symmetric instance of the relation, such as two poles of a magnet symmetrically depending on each other, or a loop can be formed by a reflexive instance, such as God's existence being self-grounded.⁵⁷ Bliss and Nolan (2018) also maintain that larger loops can be formed where there are asymmetric and irreflexive instances of grounding that fail to be transitive. Though Bliss refrains from developing examples, she notes that possible examples may be found in biology and economics.⁵⁸

Perhaps one of the main complaints against Bliss' coherentist picture is that it seems to entail that explanation (in so far as grounding is taken to be explanatory) would turn out to be circular. And explanation is the sort of thing that just is not circular. As Lowe writes,

the conjunction "because" is asymmetrical, because it expresses an explanatory relationship and explanation is asymmetrical. Two distinct states of affairs cannot explain each other . . . The asymmetry of explanation is, of course, intimately related to the unacceptability of circular arguments.⁵⁹

Another problem with the coherentist picture is that it jettisons the hierarchical

structure of reality associated with grounding understood as a strict partial order. Many thinkers take the hierarchy or layer-cake view of reality to be integral to understanding the world's structure and more or less vindicated by the natural sciences, even though this is far from a settled issue.⁶⁰ In response, the coherentist might plausibly claim that coherentism is compatible with the idea of a hierarchy of levels, each one of which is characterized by specific mutual dependence relations.⁶¹ On this view, coherentism might not apply to every aspect of reality or every instance of the grounding relation, but only some.

Metaphysical infinitism is another non-foundationalist ontology that perhaps does not run afoul of our metaphysical sensibilities in the way the coherentism might. There are two prominent versions of infinitism in the literature. We turn to the emergentist version first.

4.2 Emergentist Infinitism

Infinitism is the view that there is no fundamental level or foundation of reality, but only limitless descent. The key challenge for the infinitist, then, is to show how infinitism does not run afoul of a vicious infinite regress of dependence relations as Schaffer has argued (section 2.1). To avoid this vicious regress, Matteo Morganti (2014) denies Schaffer's notion that being is transferred from basic being to derivative being. Instead, it is *in virtue of* an infinite chain of dependence that being emerges. On this view, there is nothing foundational but everything that does exist, "exists exactly *in virtue of the infinity* of the constituent series."⁶² According to Morganti's emergence model, "... the being of any given entity gradually arises out of an infinite series of progressively less dependent entities—it is not wholly transmitted, as it were, from a basic, ungrounded level to all the dependent ones in a step-by-step fashion."⁶³

Morganti models his view after an analogous position in epistemology offered by

Klein (2007), "wherein justification comes out gradually from the chain of reasons as a whole, *and is complete only because the chain comprises more than a finite number of justificatory reasons.*"⁶⁴

Note that Morganti agrees with Schaffer that being has to come from somewhere. But Morganti thinks we do not need basic being, a foundation, in order to give an account of where it comes from. On the emergentist picture, we can deny foundationalism because there is no need for there to be a specific entity or entities at the bottom (or top) of dependence chains that do not themselves depend upon other entities.

4.3 Boring Infinitism

Tuomas Tahko's (2014) infinitist model differs slightly from Morganti's in that it is boring rather than emergentist. For Tahko, being does not gradually emerge out of an infinitely descending chain of dependence. Rather, Tahko employs a weaker notion of absolute fundamentality and well-foundedness and argues that a mereological chain of dependence, when we follow it down, supervenes upon an infinitely descending boring structure. This boring structure itself can be of any length as long as it eventually repeats itself. A mereological chain terminates in the boring structure, which forms a sort of atomless supervenience base that is itself nevertheless infinitely descending, though repetitive.⁶⁵

Tahko's model maintains that the world is gunky. However, a chain of mereological dependence is well-founded on this model only in the sense that the mereological chain necessitates an infinitely descending yet repetitive structure that acts as the quasi-fundamental level of reality. He writes, "The bottom level is exhausted by the repetition, that is, the repeating structure as a whole constitutes the fundamental level."⁶⁶ So, Tahko maintains that a mereological chain which supervenes upon a boring structure is, in a weaker sense, well-founded. Tahko thus

avoids an emergentist picture by upholding a quasi-foundationalist picture of the world. But Tahko maintains that his model is a genuine version of metaphysical infinitism.

CONCLUSION

As we have seen, there are a number of important challenges to metaphysical foundationalism in the recent literature. While there may be plausible arguments in favor of foundationalism, there seems to be something of a consensus emerging that these arguments are inconclusive. We have also seen that the

connection between substance and foundationalism must be qualified in important ways. A distinction must be made between substance *simpliciter* and a comparative notion of substance. Furthermore, the existence of substances *simpliciter* does not necessarily entail that those substances act as a foundation in a given ontology. As such, the question of whether we are pluralists or monists with regards to ontological dependence is a key factor in understanding foundationalism.

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NOTES

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1. See Dixon (2020).
2. Another linking notion is supervenience. But supervenience has been recognized to fail in this regard. Since what grounding theorists are after is a kind of metaphysical dependence, necessary covariation is ill-suited to the task. One oft-quoted critique is that of Kim (1993), “Supervenience itself is not an explanatory relation. It is not a “deep” metaphysical relation; rather, it is a “surface” relation that reports a pattern of property covariation, suggesting the presence of an interesting dependency relation that might explain it” (p. 167).
3. Trogon, (2018, p. 182).
4. Cameron (2018).
5. Schaffer (2010a, p. 37).
6. Tahko (2018b).
7. Aristotle writes, “Thus everything expect primary substances is either predicated of primary substances, or is present in them, and if these last did not exist, it would be impossible for anything else to exist” (Categories 2b 5–6). See Lowe (1998), Gorman (2006a) and (2006b) for contemporary discussions of an independence criterion for substance. See Koslicki (2018) for a unity criterion of substance.
8. See Schaffer (2009, p. 378), for his use of the term “substance” with regards to his priority monism.
9. Koslicki (2018, p. 131). Koslicki (2015b, p. 72) also notes that the concept of substance can take on even further explanatory roles depending on whether we use “substance” in a taxonomic or relational manner, in addition to the absolute and comparative roles of substance. I have highlighted only the absolute and comparative notions of substance for my purposes here.
10. A historical example of the absolute use of substance is the substance monism of Spinoza. A contemporary example of a comparative use of substance is Koslicki’s (2018) hylomorphism. Koslicki is clear that hylomorphic compounds, on her view, are more deserving of the status of substance than other entities, and so are only relatively fundamental, not absolutely fundamental.

11. Sider (2011, p. 124).
12. See Tahko (2018b) and Raven (2016) for further discussion.
13. See Theodore Sider's (2011) discussion of structure as a competing account of fundamentality.
14. See Rosen (2010) and Audi (2012). Schaffer (2009) holds that grounding can obtain between entities of arbitrary ontological categories.
15. See Bennett (2011) and (2017).
16. To be more precise, the termination of a grounding chain is only one sense in which grounding can be well-founded and may not necessarily be the best way to understand the notion. See Dixon (2016) for an in-depth discussion of how best to capture the claim that grounding is well-founded.
17. Schaffer (2010a, p. 62).
18. Schaffer (2016, p. 95).
19. Schaffer (2010b, p. 345).
20. Schaffer (2016, p. 95).
21. Bohn (2018a, p. 171).
22. Bliss (2013, p. 406).
23. Bliss (2013, p. 407).
24. Aikin (2005, p. 195).
25. Bliss (2013, p. 408).
26. Bennett (2017, p. 120).
27. Wilson (2014, p. 561).
28. Wilson (2016, pp. 198–199).
29. Cameron (2008, p. 12).
30. Cameron (2008, p. 12).
31. Bliss (2019, pp. 362–363).
32. Fine (2010, p. 105).
33. Bliss (2019, p. 367).
34. Tahko (2018a, p. 240).
35. See Schaffer (2009), (2010a), and (2010b).
36. He writes, "I assume . . . that matter is ultimately particulate. I assume that every material thing is composed of things that have no proper parts: 'elementary particles' or 'mereological atoms' or 'metaphysical simples'" (van Inwagen 1990, p. 5).
37. In response to van Inwagen's assumptions, Ladyman and Ross (2007) write, "None of these assumptions, on which are based arguments of considerable attention in the metaphysics literature, finds any basis in contemporary science" (p. 17). And earlier they write, "the attempt to domesticate twenty-first-century science by reference to homely images of little particles that have much in common with seventeenth- and eighteenth-century mechanistic and materialist metaphysics is forlorn" (p. 7).
38. Cameron (2008, p. 6).
39. Schaffer (2003).

40. Wilson (2014).
41. Koslicki (2015a, n2).
42. Wilson (2014).
43. Bernstein (2021, p. 1070).
44. Deng (2020, p. 418). Also, see Bohn (2018b).
45. To be precise, Deng does not explicitly argue for God in his paper. Rather, Deng only argues that there is one existent in which all else is grounded but does not note the important theological implications of this argument.
46. Deng (2020, p. 422).
47. See Schaffer (2010b, n3).
48. Raven (2016) writes:
- There is a kind of foundation for each kind of dependence. Thus, existential dependence concerns whether an entity's existence depends on the existence of another, and so an existential foundation will existentially depend on nothing else. And eidetic dependence concerns whether an entity's essence (nature, identity) depends on that of another, and so an eidetic foundation will eidetically depend on nothing else.
- (p. 611)
49. Lowe (1998) defines the notion as follows, "The identity of x depends on the identity of $y = df$ Necessarily, there is a function F such that it is part of the essence of x that x is the F of y " (p. 149).
50. Lowe (1998, p. 158).
51. Lowe (1998) writes, ". . . there cannot be infinite descending chains of objects standing in relations of strong existential dependency to one another: in short, that all real existence must be 'grounded' or 'well-founded'. Such an 'axiom of foundation' is quite probably beyond conclusive proof and yet I find the vertiginous implications of its denial barely comprehensible" (p. 158).
52. Lowe (1998, p. 158).
53. It is also for this reason that Lowe affirms the need for a foundation (primitive substances). He writes, "For in the absence of any primitive substances, it appears, no other concrete objects could exist at all, including even places and times," Lowe (1998, p. 172).
54. For a pluralist view of dependence, see Tahko and Lowe (2015), Koslicki (2012), and Lowe (1998).
55. See Schaffer (2009) and (2010a) for a monist view of dependence. On Schaffer's view, the grounding relation is highly unified, encompassing a wide variety of phenomena and other dependence notions. Cameron (2008) also adopts this assumption.
56. For example, Schaffer (2010a) originally claimed that priority monism is necessarily true. He writes, "Now I take it that Monism and Pluralism, though defined as do trines about the actual world (§1.4), are metaphysically general theses, in the sense that whichever doctrine is true, is true with metaphysical necessity" (p. 56). See Siegel (2016) for an argument that priority monism is contingent.
57. Bliss (2014, p.248).
58. Bliss (2014, p. 248).
59. Lowe (1998, p. 144).
60. See Schaffer (2003) and Markosian (2005) for some discussion of the levels metaphor.
61. Morganti (2018, p. 269).
62. Morganti (2014, p. 235).

63. Morganti (2014, p.232).
 64. Morganti (2014, p. 235). Morganti's emphasis.
 65. Tahko (2014, p. 261).
 66. Tahko (2014, p.263).

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