

Could a Middle Level Be the Most Fundamental?

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Abstract: Debates over what is fundamental assume that what is most fundamental must be either a “top” level (roughly, the biggest or highest-level thing), or a “bottom” level (roughly, the smallest or lowest-level things). Here I sketch an alternative to top-ism and bottom-ism, the view that a middle level could be the most fundamental, and argue for its plausibility. I then suggest that this view satisfies the desiderata of asymmetry, irreflexivity, transitivity, and well-foundedness of fundamentality, that it is on par with the explanatory power of top-ism and bottom-ism, and that it has a unique connection to the Principle of Sufficient Reason.

“I could be bounded in a nutshell, and count myself a King of infinite space...”
William Shakespeare, *Hamlet*, II, 2

“‘The Aleph?’ I repeated. ‘Yes, the only place on earth where all places are — seen from every angle, each standing clear, without any confusion or blending.’” Jorge Luis Borges, *The Aleph*

Debates over what is fundamental implicitly assume that what is fundamental must be either a “top” level (roughly, the level inhabited by the biggest or most macro-level thing or things), or a “bottom” level (roughly, the level inhabited by the smallest or most micro-level things).¹ Here I sketch an alternative to top-ism and bottom-ism I call *middleism*, the view that a middle level is the most fundamental one, and argue for its plausibility.² Assuming a tight relationship between grounding and fundamentality, fundamentality of the middle level satisfies the desiderata of asymmetry, irreflexivity, transitivity, and well-foundedness of ground. I argue that the explanatory power of middleism is on par with that of top-ism and bottom-ism. I suggest that a version of middleism is uniquely situated to satisfy the Principle of Sufficient Reason, according to which everything that exists must have a reason, explanation, cause, or ground. Finally, I propose that the view might have some advantages over more traditional options.

¹ Terminological note: here I will use “bottom level” to refer to the smallest level rather than the ontologically bottom-most level, and “top level” to refer to the largest level rather than the ontologically upper-most level.

² As far as I can see, the only contemporary work directly espousing something like middleism is Inman’s (2017) *Substance and the Fundamentality of the Familiar*, a work that was published while I was writing this paper, and which has different motivations.

I begin with a few caveats. First caveat: I myself am not a middleist. The primary aim of this paper will not be to argue that middleism is better than its competitors, though I'll say a few remarks about that later on. Rather, the goal will be to argue that middleism is at least as plausible a view as top-ism and bottom-ism, and that it should not be dismissed outright on intuitive, methodological, or metaphysical grounds. I simply aim to give middleism a seat at the table.

Second caveat: there are many intricate, subtle issues in the grounding and fundamentality literature. These issues include but are not limited to: how grounding is best characterized, how exactly grounding is related to fundamentality, what the grounding *relata* are, the modal import of grounding claims, whether grounding is a strict order, and how to distinguish partial grounds from full grounds. This paper will not delve into these very interesting and important specifics, even though they are relevant for our purposes if middleism succeeds. Rather, it will be my goal to lay the groundwork for a big picture middleist approach to grounding and fundamentality. I will go into enough detail to show that middleism is a contender, but I shall leave the technical details to another discussion.

1. Preliminaries: Grounding and Fundamentality

Recently, metaphysicians have embraced *grounding* as the relationship of metaphysical explanation that binds together the more and less fundamental. According to various friends of grounding, brains ground minds, the micro grounds the macro, non-moral facts ground moral facts, and generalizations ground their instances, to name a few applications. According to Schaffer:

“Just as causation links the world across time, grounding links the world across levels. Grounding connects the more fundamental to the less fundamental, and thereby backs a certain form of explanation.” (2012, p. 122)³

For grounding proponents, grounding is to be viewed as synchronic interlevel metaphysical dependence akin to diachronic causation, connecting different layers of

³ It is a controversial matter whether grounding can be diachronic. I will assume here that it is, but see Bennett (2017) for a dissenting view.

reality via explanation, lawful dependence, and modal necessitation. There is significant controversy over whether grounding relates facts or material things. Since I do not take the plausibility of middleism to depend on a particular resolution to the controversy, I will not take a stand on the issue, and I will shift between fact talk and entity talk.

Grounding claims are often taken to have *in virtue of* structures, as in “*x in virtue of y*” or “the house exists *in virtue of* the existence of the beams”. Grounding is generally accepted to be asymmetric (*x* grounds *y* but not vice versa), irreflexive (*x* cannot ground itself), transitive (if *x* grounds *y* and *y* grounds *z*, *x* grounds *z*) and well-founded (*x* either is the bottom level of ground or has a most fundamental level of ground).

Closely linked with grounding is the notion of *fundamentality*. Fundamentality imposes a hierarchical structure on reality based on differential ontological dependence. The *fundamentalia* are such that “all God has to do” is make those things, and the rest of reality comes for free. Fundamentality theorists distinguish between the properties of *absolute fundamentality*, according to which its bearer depends on nothing for its existence, and *relative fundamentality*, according to which entities are more or less ontologically dependent relative to each other. Those who posit a most basic level from which all other things are derived often hold that such a level is absolutely ontologically independent. Other inter-level comparative dependence relations obtain above the most fundamental level. For example, it is common to hold that persons are more ontologically independent than cities in the same explanatory sequence, and that particles are more ontologically independent than the chair that they make up.

Together, grounding and fundamentality are intended to model reality as a dense, multi-level layer cake of sorts, with inter-level dependence relations imposing a unidirectional, hierarchical structure running from the most fundamental to the most derivative. Proponents of this approach can be further divided along several dimensions of controversy, each of which is relevant to the plausibility of middleism.

First, there is controversy over whether grounding is *well-founded*—roughly, whether reality terminates in an ultimate, ungrounded level or proceeds upwards or downwards without bound. Metaphysical *foundationalists* hold that reality is in some sense well-founded; anti-foundationalists hold that reality does not or might not have an ultimate foundation.

Second, there is controversy over what is fundamental and how many

fundamentalia there are. According to *monists*, there is one fundamental thing. *Existence monists* believe in the existence of only one thing; *priority monists* believe in only one fundamental thing. *Existence pluralists* believe in the existence of many things, and *priority pluralists* believe in many fundamental things.

Third, the comparative merits of monism and pluralism are intertwined with controversy over whether grounding chains terminate “upwardly” (i.e., with the Cosmos or the whole) or “downwardly” (i.e., at the objects or parts at the bottom-most level of reality). A common package of views bundled into priority monism takes the top-most whole, the Cosmos, to be the most fundamental level and to ground everything below it. Priority monism is situated against a package of views that takes the bottom-most things, often the material simples, to ground everything above them. Schaffer explains the division thusly:

“The *monist* holds that the whole is prior to its parts, and thus views the cosmos as fundamental, with metaphysical explanation dangling downward from the One. The *pluralist* holds that the parts are prior to their whole, and thus tends to consider particles fundamental, with metaphysical explanation snaking upward from the many. Just as the materialist and idealist debate which properties are fundamental, so the monist and pluralist debate which objects are fundamental.” (2010, p. 1)

In the former case, all God must do is create one thing, the Cosmos, and everything else follows. In the latter case, all God must do is create the bottom-most things, the simples, and everything else follows.

Call *top-ism* the conjunction of the views that reality terminates upwardly, that the whole grounds the parts, and that the Cosmos grounds everything less fundamental. Call *bottom-ism* the conjunction of the views that reality terminates downwardly, that the parts ground the whole, and that the bottom-most level grounds everything less fundamental. Traditionally, these two views are thought to be the major options in logical space for proponents of grounding and fundamentality. Either the top level builds the rest of reality from the top down, or the bottom level builds reality from the ontological ground up.

Top-ists and bottom-ists compete for the most intuitive, parsimonious, and explanatorily powerful packages of views. The existence monist top-ist can deny the proper parthood relation and thus dodge tricky questions about how many *fundamentalia*

there are and at what level they exist, but faces counterintuitive conclusions about what there is (only one maximal thing, but not any computers or iPhones or coffee cups), how it builds (from the highest level, downward), and how the apparent homogeneity of the one thing represents the apparent heterogeneity of reality. The pluralist bottom-ist presents a picture of the world that accords with our intuitions about how reality is built, but faces significant explanatory burdens (exactly how many *fundamentalia* are there, and what are they?) and charges of ontological extravagance (there are *that many* fundamental things or *that many* derivative things?), among others. It is not my primary aim in this paper to argue against these views, so I will not discuss the matter further. I turn now to an alternative: a middle ground (as it were).

2. The Middle Ground

Let the *middle level* be the level inhabited by medium-sized dry goods like iPhones, tables, and coffee cups, and call *middleism* the view that a middle level is the most fundamental.⁴ I will use the level of medium-sized dry goods as my exemplar, but I intend my arguments to apply to any non-top-most or non-bottom-most level. (Here I refer to “a” middle level rather than “the” middle level, as which middle level is fundamental might be controversial. More discussion of this point further on.) Though for terminological and conceptual ease I focus on a middle level as defined by its physical size, I take my arguments to apply, *mutatis mutandis*, to category-based levels like the biological level (which is generally taken to be “above” the chemical and physical levels but “below” the economic and psychological levels), or even to intermediate mereological levels above parts but below wholes.

Taking fundamentality to be absolute ontological independence, middleism takes those facts “below” and “above” the middle level, like facts about particles and galaxies, to depend on facts involving entities at the most fundamental middle level. A most fundamental middle level grounds all facts above it and all facts below it. A middle level is the most ontologically independent of all levels: all God has to do is create the fundamental middle level of reality, and the existence of the bottom-most levels and the

⁴ Though I will focus on what it would be for a middle level to be the most fundamental, I take the view to apply to other middle-level entities such as theories, categories, logical operators, truths, laws, etc.

uppermost levels comes for free. Viewing reality through the fundamentality glasses, as we move our gaze upon reality from the bottom-most to the top-most level, we see some least fundamental things (the particles), proceed to the most fundamental things (the medium-sized dry goods), and then finally to more least fundamental things (the top-most thing or things).

Such a world is logically, conceptually, and metaphysically possible. Neither definitions of fundamentality nor definitions of grounding require ontological primacy of a non-top-most or non-bottom-most level. That there is possible world in which the *fundamentalia* are medium-sized things is ideally conceivable in Chalmers' sense: to the extent that fundamentality relations are imaginatively accessible, it appears to be no greater a difficulty to positively conceive a middleist world than it is to positively conceive of the alternatives--which no one appears to believe we have difficulty positively conceiving. One can easily imagine a world exactly like ours in which God thinks "I don't feel like making the small things in order to create the big things today. Rather, I prefer to create every single medium level thing. I will make every iPhone, couch, human, toaster (etc.), and from those things, the bottom-most particles and the top-most thing will arise." Whether or not *our* world is a middleist one, the coherence and possibility of middleism should shed doubt on top-ist and bottom-ist dogma, as well as the modal necessity of top-ist and bottom-ist claims.

Middleism has past and contemporary historical precedent. The ontological primacy of Aristotelian substances and modes, rather than basic particles or cosmoi, is a forerunner to middleism.⁵ Heidegger's ontologically basic "ready-to-hand" objects (roughly, tools and things of value) speak of middleist sympathies. Van Inwagen's famous contention that the only composites are living organisms is a *de facto* commitment to the idea that only middle-level living things like cells can compose bigger middle-level things like people.⁶ Merricks' mereological nihilism, according to which there are only conscious beings and tiny microphysical bits, can be interpreted as a hybrid

⁵ On Aristotle as a forerunner to priority monism, Schaffer (2013) writes: "For Aristotle, substances are fundamental, and without them 'it would be impossible for any of the other things to exist' (1984a, p. 5; cf. Spinoza 1994, p. 85). Aristotle likewise views substances as integrated, being 'that which is compounded out of something so that the whole is one—not like a heap, but like a syllable ...' (1984c, p. 1644)." Such an interpretation is just as easily viewed as a kind of middleism as it is a kind of priority monism.

⁶ See van Inwagen (1990).

form of middleism.⁷ Korman's commonsense metaphysics methodologically supports the ontological primacy of perceptually available everyday objects.⁸ Giberman argues that certain spatiotemporally extended, mereologically complex, topologically connected concreta are among the fundamental, while still being proper parts of the whole cosmos.⁹ And Inman's middleist mereology, which I discovered while producing this paper and with which I share great sympathy, posits middle-level essences of familiar objects as the fundamental things and thereby proposes to solve the problems of material composition and constitution.¹⁰

There are more scientific and metaphysical views with middleist sympathies than one might think. Spatially distinct galaxies that are not parts of each other's light cones, from which and upon which everything depends, exemplify middleist ontology. Classic quantum mechanics accepts entangled systems, the major understanding of which takes them to determine states below them and above them. It is not implausible to think that the biological level grounds the chemical and physical levels below it and the psychological and economic levels above it. Mereologists who accept extended simples back a kind of middleism according to which extended simples ground qualitative variation within the simples and ground facts about the simples themselves.

With this warm-up in mind, we can tend to the details of middleism more formally. I take the most general version of middleism to be the conjunction of the following views:

(Middle Fundamentality) An absolutely ontologically independent middle level is the most fundamental level.

(Middle Grounding) All facts obtain in virtue of middle-level facts.

Optionally, a middleist can hold:

(Metaphysical Foundationalism) Reality terminates at a fundamental middle level.

⁷ See Merricks (2001).

⁸ See Korman (2015).

⁹ See Giberman (2015).

¹⁰ See Inman (2017).

Now for a bit of explanation and articulation of each principle.

Middle Fundamentality is a thesis about the type of ontological independence exhibited by the middle level, and a claim of comparative fundamentality about levels above and below it. According to Middle Fundamentality, the building blocks of reality inhabit a middle level. Middle Fundamentality can be further divided into pluralist and monist versions. Pluralist middle fundamentality takes there to be numerous *fundamentalia* at the middle level. Monist middle fundamentality takes there to be a single fundamental thing at the middle level (the übermiddle?) that grounds all else. In the rest of the discussion, I will assume pluralist middle fundamentality, as I take it to be less exotic than monist middle fundamentality.

That the middle level builds the other levels might seem to be a *reductio* of the view at first glance. We have strong intuitions about the directions of building and dependence, and they are difficult to square with the idea that medium-sized dry goods are the ultimate grounds and the basic builders. The thought is that “upward” building is intuitively palatable: as our childhood intuitions based on Legos suggest, the littler things build the bigger things. And some can even be talked into the idea that “downward” building is intuitively acceptable: perhaps the whole can build its parts, as when a human body unites a group of living cells and organs. But how can the middle level do both of these jobs? I respond offensively: Middleism can be no *more* counterintuitive than top-ism or bottom-ism on the basis of building directionality, since it is committed to both upward and downward building.¹¹ Anti-middleist intuitions are shared by those who find priority monism implausible due to its commitment to “downward” rather than “upward” building, but are no worse than those had by priority monism alone.

Middle Grounding holds that the middle level is or contains the ungrounded grounding facts, and all other facts are derivative. In the *lingua franca* of the grounding literature, all facts obtain in virtue of Middle Facts. Fundamental grounding claims take the form “x obtains in virtue of y”, where y is a fact about some middle-level fundamental entity. If Middle Grounding is true, then facts about chairs, iPhones, tables, and humans ground facts about cells and about galaxies.

¹¹ If one finds building in either direction counterintuitive, then middleism will be doubly counterintuitive. It is beyond the scope of this paper to defend the intuitiveness of building more generally.

Middle Grounding satisfies logical desiderata for a theory of ground. Middle Grounding is *asymmetric*: facts at the middle level ground facts at levels lower than them and levels higher than them but not vice-versa. Middle Grounding is *irreflexive*: middle-level facts don't ground themselves. And Middle Grounding is *transitive*: if fact *x* grounds fact *y* and fact *y* grounds fact *z*, fact *x* grounds fact *z*.

A bit of explanation on the latter point. Unidirectionality of the grounding relation plays a central role in securing transitivity of ground in top-ist and bottom-ist approaches. In cruder terms, all the “more fundamental than” arrows point up or point down. Thus the fact that the particles are arranged in a particular way “upwardly” grounds the fact that the house exists, and the fact that the house exists “upwardly” (and partially) grounds the fact that the cosmos contains exactly what it does. Middle Grounding, in contrast, is committed to the bidirectionality of ground: the middle grounds downwardly and upwardly. *Prima facie*, this seems to pose a problem for the transitivity of ground: how can grounding be transitive if the particles don't ground the Cosmos (or vice-versa)?

The answer, according to Middle Grounding, is that the particles don't ground the Cosmos. Transitivity of grounding is preserved upwardly from middle facts and downwardly from middle facts, but not unidirectionally across all levels. For example, the fact that the house exists grounds the fact that the particles exist, and the fact that the house exists (partially) grounds the fact that the Cosmos exists, but the fact that the particles exist does not (partially) ground the fact that the Cosmos exists. Transitivity does not require that the arrows of ground homogenously face the same direction.

A final note on Middle Grounding: one need not accept it in order to hold a middleist conception of the world. One might believe in a distinction between the fundamental and the derivative without believing in a substantive notion of ground. According to this more minimal middleism, the middle level is the most fundamental one, other levels are ontologically derived from the middle level, and presumably various other sorts of non-grounding dependence relations obtain between levels. Wilson's (2014) form of grounding skepticism, according to which there are many little-g grounding relations (determinate/ determinable, realization, composition, constitution) but not a single big G Grounding relation that unites them, is compatible with Middle

Fundamentality.¹²

With respect to metaphysical foundationalism, the middleist has several options open to her. She might opt to accept metaphysical foundationalism, suspecting that it is neither conceptually nor metaphysically coherent for reality to iterate interminably into a middle level. In contrast, it is at least conceptually coherent that reality infinitely descends or ascends without bound. Although there is controversy on this point, well-foundedness is widely taken to be a desideratum for theories of grounding and fundamentality. The thought is that whatever is grounded inherits its reality from its grounds, and the source of the inheritance must begin somewhere.¹³ Rabin and Rabern (2016) distinguish between well-founded in the sense of “bounded from below” and well-founded in the sense of “has a foundation”. By definition, middleism cannot satisfy the first type, since the view itself constitutes a challenge to the fundamentality of the bottom level. But it certainly comports with the idea that reality *has a foundation*, since lower-level things like particles and highest-level things like planets inherit their existence from middle-level things like iPhones and toasters and neighborhoods.

The middleist need not be a metaphysical foundationalist, however. She might try to make sense of a reality that iterates into the middle level without bound.¹⁴ Making use of the notion of relative fundamentality, this sort of middleist asserts that each level closer to the middle level is more fundamental than the last. Anti-foundationalist and foundationalist middleism share major traits: with both, viewing the world through fundamentality goggles yields a view of the world with the least fundamental entities at the bottom, the most fundamental things at the middle, and more least fundamental entities at the top. They diverge with respect to the relative versus absolute

¹² In separate work, Wilson argues that determinables are more fundamental than determinates, a view friendly to middleist claims.

¹³ Schaffer (2016) writes: “One cannot be rich merely by having a limitless sequence of debtors, each borrowing from the one before. There must actually be a source of money somewhere. Likewise something cannot be real merely by having a limitless sequence of ancestors, each claiming reality from its parents. There must actually be a source of reality somewhere.”

¹⁴ In correspondence, Alex Skiles gives the following example: Suppose that x is more fundamental than y iff x has a diameter closer to n inches than the diameter of y . Then we can conceive of a world in which there are (i) spherical objects of $n - 1$ inches diameter, $n - 1/2$ inches diameter, $n - 1/4$ inches diameter, and so on; (ii) spherical objects of $n + 1$ inches diameter, $n + 1/2$ inches diameter, $n + 1/4$ inches diameter, and so on; and (iii) no other objects. In such a world, middleism is true in the sense that the more towards the middle we go the more fundamental we go, yet there is no most foundational middle level owing to a Xeno’s paradox-type situation.

fundamentality of the middle level.

More generally, anti-foundationalists and foundationalists alike run into trouble with the Principle of Sufficient Reason (PSR), the “rationalist” principle roughly according to which everything that exists must have a reason, explanation, cause, or ground. Anti-foundationalists face the challenge of explaining whence ultimate being arises if reality interminably ascends or descends. Apparent problems arise for the anti-foundationalist when an ascending or descending chain of grounding facts fails to supply a basic reason for its own existence. Fine, for example, 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” (2010, p. 105).

Schaffer echoes this worry:

“There must be a ground of being. If one thing exists only *in virtue of* another, then there must be something from which the reality of the derivative entities ultimately derives.” (2010, p. 37)

The anti-foundationalist must contend with the worry that Being is a victim of endless buck-passing, ontologically and explanatorily. In Schaffer’s words (2010), “Being would be infinitely deferred, never achieved.” Such a concern drives many into the arms of foundationalism.¹⁵

Nevertheless, foundationalism also offends the PSR by accepting a metaphysical basis of reality for which there is no explanation. Being is not in danger of infinite deferral, since the buck stops with the most fundamental things. But the explanatory primitiveness of *fundamentalia* runs contrary to the doctrine that everything has an explanation.

I don’t pretend that the middleist has immensely more satisfying answers to these worries than top-ists and bottom-ists, but she is no worse off than her competitors. If the rationalist demands an answer to the question: why do the *fundamentalia* exist?, there is no answer to this question available to top-ists and bottom-ists that is not available to the middleist. That the middle level is the primitive one doesn’t pose a greater mystery or

¹⁵ Bliss (ms) suggests that many foundationalist arguments implicitly appeal to the PSR.

explanatory burden than the primitiveness of other levels. And if the *fundamental*ia exist *ex nihilo*, the level at which they exist doesn't matter.

Nonetheless, the foundationalist middleist has a unique move open to her: she can accept the simultaneous possibilities of the world being both gunky (in which everything has a proper part) and junky (in which everything is a proper part of something). The world could infinitely ascend upwards from the middle level and downwards from the middle level, and the middle level would explain all of the matter in both directions. If Middle Fundamentality and Metaphysical Foundationalism are true, even infinitely ascending *and* descending chains of being have a reason for existence provided by the middle level.¹⁶

As with foundationalist top-ism and bottom-ism, a foundational middle level does not supply a reason or ground for its own existence. But if any level has readily available reasons for its existence, the middle level is a strong candidate. Middle-level objects are perceptually and intuitively given. They have rich essences.¹⁷ Some middle level things are conscious. Middle level things are apt for evolutionary and teleological stories about their existence. Admittedly, these are not grounding or fundamentality-based explanations. But the availability of these sorts of explanations for the existence of the middle level, compared with the mystery attached to the existence of the bottom and top levels, accords an advantage to middleism with respect to the Principle of Sufficient Reason.

3. Objections to Middleism

Like other *prima facie* implausible metaphysical views (ontological pluralism, mereological nihilism, and existence monism, to name a few), middleism is best illuminated by defense against objections. Here I'll articulate and discuss a few of the most obvious ones.

¹⁶ Schwarz (2016) agrees, writing: "Reality might be infinitely divisible, but grounding chains nevertheless terminate, radiating inwards towards the familiar macroscopic objects. This kind of view might be defensible, but it is counterintuitive and would require independent motivation. Since I am not currently aware of it having any defenders, I set it aside here." This view is similar to the one I aim to make plausible, though I hold that grounding chains radiate outwards.

¹⁷ Dasgupta (2015) holds that essentialist facts are the best candidates for explanatorily autonomous facts.

The first objection is that a middle level is not suited to be the most fundamental just because it cannot structure reality unidirectionally. According to top-ism and bottom-ism, reality is built with dependence relation upon dependence relation, with degrees of fundamentality increasing or decreasing upwards or downwards. Facts about houses depend on facts about particles. Facts about neighborhoods depend on facts about houses. Or: biological facts depend on chemical facts. Psychological facts depend on biological facts. But such a hierarchically ordered dependence picture is not available to the middleist.

I respond: what is important about fundamentality as a metaphysical tool is the structure it imposes on reality, not the unidirectionality of such structure. Dependence relations impose ontological order, but not necessarily the uniform direction of such relations. It is not as if Reality is *literally* built layer upon layer, like a very tall and wide skyscraper, with the dependence facts arising from these layers. Rather, it is the collective interlevel dependencies, whichever way they face and however they are layered, that impose ontological structure. Arguably, interlevel dependencies are all we need to create the familiar multi-tiered structure of reality. We do not require unidirectionality all the way through.

A related objection holds that middleism violates the spirit of ground as an analogue of causation. Though I am not a fan of the grounding-causation analogy¹⁸, suppose that grounding is “metaphysical causation”, on account of their mutual involvement in determination, lawful necessity, and explanation. Then, the objection goes, a middle level is not suited to be most fundamental because intermediate causes are not suitable to count as sources of bidirectional causal explanation. Events are to be causally explained in terms of their dependence on past events, but they are not to be causally explained in terms of their dependence on past events *and* future events.

I respond that causation is in fact well-suited to bidirectional explanation. If backwards explanation is coherent, events can be explained in terms of their antecedents *and* their consequents. Consider an example of backwards explanation from Jenkins and Nolan (2008): a planet slows down when it is about to reach its apogee. A later event, the planet’s imminent meeting with its apogee, explains an earlier event, the planet’s slowing

¹⁸ See Bernstein (2016) for some grumpy arguments against the causation/grounding analogy.

down. The direction of explanation can be expanded to include a later event—for example, the planet’s particular position as it meets the apogee. Here, a single event (the planet’s immanent meeting with its apogee) explains a past event (the planet’s slowing down) and a future event (the planet’s particular position). Similar examples of explanatory bidirectionality can be generated.

Another objector might hold that middleism is irredeemably *arbitrary*: whereas bottom-ism and top-ism apparently come with reasons that the top level or the bottom level is fundamental, in virtue of what is a particular middle level more fundamental than other middle levels? The objection can be understood in two more specific ways. The first way holds that there is no plausible metaphysical underpinning for the fundamentality of the middle level. The second way holds that there is no justification for believing that a *particular* middle level is the fundamental one.

To both versions of the objection, I respond: what makes a middle level a most fundamental one is just that it builds the other levels. Further explanation isn’t needed, and top-ist and bottom-ist approaches do not offer one. How satisfying this response is depends on the answer to a central question in the grounding literature: whether grounding facts themselves have grounds (and in particular, whether *fundamental* grounding facts, those facts containing at least one fundamental relatum, are further grounded). If fundamental grounding facts are grounded, then what makes the middle level fundamental is grounded in some further fact—just like it would be for the top-ist or bottom-ist with the same commitments. If fundamentality facts are ungrounded, then what makes the middle level fundamental is primitive—just like it would be for top-ists and bottom-ists with primitivist commitments. Either way, the middleist isn’t worse off than her competitors with respect to why a particular level, rather than another, is fundamental.

A cluster of objections to middleism centers on the size of the most fundamental level. The Size of the Middle Objector says: look, I know how big the smallest level is. It’s just the one inhabited by the smallest, most ontologically basic things. And I know how big the biggest level is: it’s just the one such that nothing is bigger. I even know how big the chemical level is and how big the biological level is. But I don’t know how big the most fundamental middle level is: I don’t know where to draw the lines. Why houses but not planets? Why wooden planks but not houses? We need principles for sorting what

is fundamental and what isn't. Size is gradable, and doesn't offer the clean distinctions required for a metaphysics of fundamentality.

I respond: size itself doesn't matter to fundamentality. Calling the middle level fundamental is no more mysterious than calling the bottom-most or top-most levels fundamental. That principles for distinguishing the fundamental from the nonfundamental are not easy to come by isn't a mark against its plausibility. Nor is such difficulty unique to middleism. Much of the literature struggles with what to call fundamental even within top-ist and bottom-ist frameworks, especially with respect to whether and how many derivative entities are to be included in the Existence Club. And while I remain neutral on the "Do the grounds have grounds?" question, if being fundamental is itself a fundamental fact, no further answer is needed in any case.

A second, related objection holds that fundamentality simply doesn't track size. Holly Andersen (private correspondence) puts this point nicely:

"It may be that physical size scale turns out to be a quite uninteresting and minimally explanatory part of the world, and that the relevant levels for fundamentality simply don't correspond in any interesting way with physical size scale levels."

Call this objection *Size Doesn't Matter*.¹⁹

I respond: physical size need not be the dimension of fundamentality in order for middleism to be a live option. In my discussion, I have focused on physical size because it accurately reflects the background assumptions of the grounding and fundamentality literature. But take any other independent ordering one prefers, whether it be most conscious to least conscious, most loved by God to least loved by God, most in the past to most in the future, etc., and stipulate that there is a middle part of *that* ordering which is most fundamental. The spirit of middleism requires only that a middle level be fundamental, not that the middle level be defined in terms of size. As far as I can see, my remarks apply to any conception of the middle level.

The final worry I will articulate and address focuses on the inferential and predictive power of the middle level. One instrumentally valuable feature of the grounding and fundamentality worldview is that we should, in principle, be able to

¹⁹ Thanks to Holly Andersen for developing this objection.

predict and infer what exists from the *fundamentalia*. Given the existence and arrangement of the most ontologically basic simples, the argument goes, we should be able to infer what else exists. This imaginative exercise seems easy to achieve for bottom-ists, for whom reality is built out of the smallest basic things, and easy to imagine for top-ists, who simply have to infer what exists by looking at the features of the uppermost whole. Does the middleist have the same options available? Yes. From the maximal panoply of middle-level things, we can infer what exists at the bottom-most and top-most levels, and presumably infer why those things exist and how they behave. There is no explanatory inference strategy available to the top-ist and bottom-ist that is not available to the middleist. A middle level is just as inferentially and predictively useful as a largest or smallest level.

4.0 Advantages of Middleism

Thus far I have focused on making middleism plausible and staving off the most obvious objections. I will now suggest that middleism has some advantages over top-ism and bottom-ism, but I leave full-throated arguments in its favor for another discussion.

Middleism secures the existence and explanatory power of perceptually available ordinary objects. Bottom-ists struggle to justify the existence and explanatory force of such objects, since the itty bitty ontologically basic things are supposed to be doing the major explanatory work. And monist top-ists struggle to explain qualitative variation in the reality at levels below the Cosmos, including the apparently distinct myriad objects and humans that constitute the *relata* of our everyday interactions. Middleists have no such problems, or at least not the same ones: since the middle level is the most fundamental, there is no question about how it exists or whether it has explanatory power. A version of middleism might also vindicate the reality of social categories, moral properties, and other entities that struggle for ontological respect.

Mutatis mutandis for the causal power of everyday objects. Some top-ist and bottom-ist views are committed to the claim that the only real entities are the fundamental ones. Implicitly or explicitly, denying reality to all but the most fundamental things also denies causal power to all but the most fundamental things. Thus the priority monist, for example, must hold that only the whole Cosmos is a cause of anything at all. Even the

most extreme sort of middleist—the one who denies existence to all but the middle level—has no such problem. For she can easily commit to and explain the causal powers of everyday objects: since they are the *fundamentalia*, they are the causes.

5. Conclusion

The view that a middle level could be the most fundamental level has been widely ignored in the Great Fundamentality Wars. Having examined the methodological, metaphysical, and intuitive strikes against the view, middleism does not seem to be much worse off than prevailing packages of top-ist and bottom-ist views in the fundamentality literature. There is no reason not to treat it as a viable metaphysical option. Though such reasons might be discovered, to fail to further explore middleism is to neglect a promising avenue of metaphysical explanation.²⁰

²⁰ Thanks to Holly Andersen, Fatema Amijee, Daniel Nolan, Alex Skiles, Peter van Inwagen, and audiences at PSR Workshop at Simon Fraser University, the Notre Dame Metaphysics Reading Group, and the University of St. Andrews for feedback on the ideas in this paper.

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