

The Determination First Approach to Plexology: Unpublished Long Version¹

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AUTHOR'S NOTE: this is the Unpublished Long Version of the similarly titled paper appearing in *Australasian Philosophical Review* (2026).

This was my initial submission in Fall 2024, but unfortunately the editor noticed that it was twice as long as it was supposed to be. (Sorry, Dana!) I revised the paper concurrently with starting “Finding Dry Ground”, and ended up doing more than just cutting it. For example, this version does not use the terms ‘plexic’ and ‘plexology’, and was actually titled “The Determination First Approach to Metaphysical Structure”. I have retitled it to match the published paper for citation purposes.

Here are things I do in this Unpublished Long Version (ULV) that I reference in the published version:

- explicitly spell out some alternate versions of the DFA, notably a Wilsonian one that allows symmetric determination, reflexive determination, and determined fundamentals
- criticize Wilson's attempt to establish the possibility of "priority-flipping"
- criticize Wilson's half-hearted attempt to reduce relative fundamentality relations among nonfundamental things to certain non-directed relations plus a specification of what is fundamental (this is the appendix)
- indeed, I argue that Wilson is committed to primitive priority as well as absolute fundamentality, which means that she loses the cost-benefit tally.

Abstract: Wilson characterizes a “Building-Based Approach” to metaphysical structure as one of the primary competitors to her Fundamentality First Approach. I reshape that view into what I call the “Determination First Approach,” and distinguish a generic version from my own preferred implementation thereof. I then argue that Wilson miscalculates the cost/benefit comparison between the Fundamentality First and Determination First Approaches, both by underappreciating what possibilities the Determination First Approach can accommodate, and by undercounting the ontological costs of the Fundamentality First Approach. The Determination First Approach emerges as the clear winner.

Keywords: grounding, fundamentality, priority, determination, dependence

¹ Thanks to Jonathan Schaffer and Dana Goswick for discussion.

1. Introduction

Jessica Wilson and I share a pluralistic approach to metaphysical structure. I have characterized a class of determination relations that I call “building relations,” (2011b; 2017) and she has talked about a multiplicity of “small-‘g’ grounding relations” (2014, 2018), or, here, “dependence relations”. This shared pluralism seems quite notable, given the contrast with the so-called ‘groundhog’ trend in metaphysics, which takes grounding to be the only such relation.

But, alas, the similarity ends there. It turns out that her pluralism is more different from mine than I had previously thought. And Wilson embraces primitivism about fundamentality, which I have firmly and consistently rejected. I think all fundamentality facts fall out of facts about those small-‘g’ grounding relations, and she thinks matters go the other way around. I share *this* general orientation with more canonical ‘groundhogs’, or defenders of what Wilson calls the “Grounding-Based Approach” to metaphysical structure. (Indeed, as I will explain in §3, such people can agree with me about almost everything I say in this paper.) I hope this exchange will clarify the relation between our views even more than our previous exchanges have (my 2017 §3.2, §5.10; her 2019, my 2019c).

Wilson characterizes her ‘Fundamentality First Approach’—henceforth, the *FFA*—as consisting of two main theses:

Primitivist [Absolute] Fundamentality: it is metaphysically primitive that some goings-on at a world w are fundamental at w .

Pluralist Metaphysical Dependence: what makes it the case that some goings-on at a world w metaphysically depend on other goings-on at w is a matter of the holding of diverse metaphysical relations, which (against the backdrop specification of what is fundamental at w) serve as metaphysical dependence relations (ms 2).

She calls my view the “Building-Based Approach,” and characterizes it as rejecting the first thesis and accepting the second. Her overall argument is a cost-benefit one: she claims that her *FFA* is to be preferred because it offers greater benefits at no additional ontological cost.

I think this is wrong on a number of fronts. First, as I will explain in §2, it is not quite apt to characterize my approach to metaphysical structure as rejecting the first

thesis and accepting the second. In §3, I instead articulate what I call the Determination First Approach (*DFA*), and take care to state it in generic terms that abstract away from my particular 2017 attempt to implement it.

For the rest of the paper, then, the question is: which of the *FFA* and *DFA* offers more bang for the ontological buck? While Wilson argues that the *FFA* does, I will argue that her assessment both overestimates how much more ‘bang’ the *FFA* provides and underestimates how much more it costs. This requires pausing in §4 for a brief side investigation into the particular kind of bang that Wilson wants, namely the purported theoretical virtue of *ecumenicality*. In §5, I lay out the cases that Wilson wants to allow, and in §6, I argue that the *DFA*—though not my 2017 version thereof—can in fact handle almost all of them. This reduces the *FFA*’s putative extra bang to a whimper. In §7, I argue that the ontological costs of the *FFA* are much greater than Wilson has suggested, and certainly vastly higher than the *DFA*.

The end result is that Wilson is asking me to pay Rolls Royce prices for a car that isn’t any better than the Toyota I already have. This is not merely to say that her cost-benefit argument fails to show what she wants it to show, but to say that the cost-benefit argument in fact shows something else entirely. Come to my dealership and check out some sweet Camrys and Highlanders! \$0 due at signing!

2. From the Building Based Account to the Determination First Account

Wilson characterizes the Building Based Account as rejecting *Primitivist [Absolute] Fundamentality* and accepting *Pluralist Metaphysical Dependence*. Unfortunately, this won’t quite do.

2.1 *My rejection of primitivism is about relative as well as absolute fundamentality*

While Wilson is correct that I deny her *Primitivist [Absolute] Fundamentality*, that is only a claim about *absolute* fundamentality—a fact I have highlighted by inserting the word into her label. It is crucially important that I also deny primitivism about *relative* fundamentality, the notion whereby some things can be more fundamental than—‘prior to’, in Wilson’s preferred terminology—less fundamental than, or equifundamental with others:

Primitivist Relative Fundamentality: it is metaphysically primitive that some goings-on g_1 (at a world w) are more fundamental than, less fundamental than, or equifundamental with, some other goings-on g_2 (at w).

Even though Wilson postpones full discussion of relative fundamentality for future work (ms 5n19), she lays the groundwork in §§2.2 and 3.5, and we need the topic on the table now. Without it, the ontological simplicity scores of our views cannot be accurately compared. Indeed, I will eventually claim that the *FFA* fares poorly with respect to relative fundamentality (§7.2.2 and Appendix).

Right now, at the beginning of the paper, all that matters is that I deny *Primitive Relative Fundamentality* as well as *Absolute*. But I cannot resist seizing the opportunity to make the more general point out that relative fundamentality continues to be a badly underdiscussed topic in the literature. Oddly, my own view (2017, chapter 6) remains the only contender on the market of which I am aware.

This charge of neglect may sound surprising. The one sentence explanation is just this: the *more fundamental than* relation isn't identical to the grounding relation. It is frequently the case that one thing is more fundamental than another without grounding it (or standing in any other determination relation to it), such as an electron in Spain and a skyscraper in New York City (see 2017, 137-8). This means that a different and more complicated story about the *more fundamental than* relation is needed. Now, that something different and more complicated may well be entirely *in terms of* grounding/building/determination. That's certainly my own view. I think the relative fundamentality facts are or reduce to facts about grounding (or multiple determination relations). But this does not mean that merely positing the grounding relation counts as a theory of relative fundamentality. Read this footnote if you would like to hear more, including a useful analogy.²

² The analogy is with parenthood and cousinhood (the biological relations, not their vastly harder to characterize role-based counterparts). Here are three facts about the relations between biological parenthood and biological cousinhood:

- i) The *biological cousin of* relation is not identical to the *biological parent of* relation.
- ii) All facts about who is a biological cousin of whom are fully grounded in facts about who is a biological parent of whom.
- iii) Indeed, any particular fact of the form [x is a biological cousin of y] is fully grounded in a collection of facts of the following form: [x is a biological child of a], [y is a biological child of b], and [a and b are nonidentical biological children of c].

All three of these are uncontroversially true. But note that the truth of i), all by itself, means that having an account of biological parenthood—or taking it as a primitive—does not itself count as a theory of biological cousinhood. More needs to be said. This can be obscured by the relative obviousness of ii) and iii), but the fact is that they are *additional claims* beyond any mere claim about how biological parenthood works.

The analogy, of course, is that grounding is to the *more fundamental than* relation as biological parenthood is to biological cousinhood. I have just argued that everyone should accept the analog of i), and thus that the mere postulation of a primitive grounding relation does not constitute a theory of

2.2 My version of pluralism

As I noted at the beginning, Wilson and I are both pluralists of some sort. But I do not endorse the claim she calls *Pluralist Metaphysical Dependence*, for two reasons.

The first is that *Pluralist Metaphysical Dependence* invokes a “backdrop specification of what is fundamental” (ms 2; also 14, 15, 19, 24). This reflects her current view that what she has previously called “small ‘g’ grounding relations”—relations like composition and realization—are not exactly grounding or determination or dependence relations at all, not by themselves. That’s because she denies that they have a “fixed direction of priority”, instead claiming that the direction of priority is settled on a case-by-case basis in a way that requires specifying what the fundamental entities are (or at least what sorts of thing they are). Indeed, she arguably should call these relations *proto*-grounding relations or something like that.³ This aspect of Wilson’s view will reappear at various points, but again all that matters here at the beginning is that none of this is any part of *mine*.

The second reason I do not endorse *Pluralist Metaphysical Dependence* is largely terminological. Wilson formulates it as a claim about, well, dependence relations. But the pluralism I have defended, and that I believe she also intends, is about *determination* relations, and dependence and determination are not the same thing.

Determination is a sufficiency, or at least sufficiency-*ish*,⁴ notion: making the case, making obtain, etc. Dependence, in contrast, is a necessity notion: that without which not. There not only can be, but frequently *is*, determination without dependence. This is familiar in the causal case; it is why preemption and overdetermination are problematic for counterfactual theories of causation, as Lewis recognized starting with

relative fundamentality. I also claim that this is compatible with the truth of the analog of ii), and with various candidate ways of completing the analog of iii).

My point is just that is that formulating and defending the analogs of ii) and iii) is an additional task, and neither a trivial nor obvious one. Just as getting an account of biological cousinhood out of biological parenthood takes some extra work, so too does getting an account of relative fundamentality out of grounding or determination or building. And to undertake the work is to start down the road of chapter 6 of *Making Things Up*—even if you are a perfectly well-behaved ‘groundhog’ that rejects some of my more idiosyncratic commitments and constraints. (Notably, my pluralism about determination and my agnosticism about foundationalism. Getting rid of those makes the job easier.)

³ Jonathan Schaffer suggested the ‘proto’ labeling.

⁴ If grounding/building necessitarianism is false (e.g. Skiles 2015), then grounds are not strictly speaking sufficient for what they ground. See my 2017 §3.3 for the notion of *building determinism*, which I think is the better concept than building necessitarianism.

his initial 1973 formulation.⁵ It is perhaps less familiar that the same distinction holds in the putatively noncausal⁶ domain of building relations or small ‘g’ grounding relations. To avoid distractions, I shall stick the details into a footnote.⁷

Despite Wilson’s terminology, her examples are determination-ish, and I have therefore always read her as talking about determination relations rather than dependency relations, and will continue to do so here.

In light of these two issues, I prefer this statement of pluralism to Wilson’s *Pluralist Metaphysical Dependence*:

Determination Pluralism: there are multiple distinct determination/building relations.

Wilson, I think, would only endorse the slightly weaker:

Proto-Determination Pluralism: there are multiple distinct relations that are such that some of their instances are instances of determination.

3. The Determination First Approach (DFA) to metaphysical structure

With these modifications to pluralism and primitivism in hand, I can now reformulate my approach to metaphysical structure.

3.1 The generic DFA

I will start by characterizing the *Determination First Approach* in very generic terms, and then offer several more specific versions that take on additional commitments. This first and most generic version focuses on the nature of fundamentality, and leaves the pluralism out entirely.

⁵ Lewis initially defined causal dependence counterfactually, and defined causation—causal determination—as its ancestral. He was of course wrong to think that doing this solved the preemption problem. As he acknowledged in the postscripts (1986), cases of late preemption show that there are not always intermediaries such that a chain of causal dependence can be traced from the effect back to the intuitive cause.

⁶ I actually deny that building / grounding and causation can be so cleanly separated. See my 2017, chapter 4.

⁷ There can be “noncausal” cases of determination without dependence that map on to the causal cases. Here are two examples of noncausal overdetermination: when a conjunction is true because both conjuncts are, and when an existentially quantified statement has more than one witness. Are there nonlogical examples of overdetermination? Probably, depending on what you think of the Problem of the Many, which has grounding overdetermination at its core. One version says that bracketing a maximality constraint, each of the largely-overlapping-but-slightly-different hunks of matter h_1-h_n in the relevant region determines the existence of a particular mereologically flexible object a there—but a ’s existence does not depend upon the existence of any one of them. While it might be initially harder to conceptualize grounding or building *preemption*, it is not much different, and I leave it as an exercise for the reader. (For more on ontological dependence, see e.g. Koslicki, 2012 and Lowe and Tahko 2020.)

Determination First Approach (DFA):

1. *Determination*: there is at least one determination relation.
2. Rejection of *Primitivist Absolute Fundamentality* in favor of a definition of absolute fundamentality in terms of the metaphysical determination relation or relations committed to in 1),
and
3. Rejection of *Primitivist Relative Fundamentality* in favor of a definition of 'more fundamental than' and cognates in terms of the metaphysical determination relation(s) committed to in 1).

This most generic version of the *DFA* only commits to the bare-bones of what the name "Determination First" requires: all fundamentality facts fall out of facts about what determines what. It does not require pluralism about determination, and can in fact be implemented in a number of more specific ways by replacing the merely existential *Determination* with something more committal that entails it.

3.2. The Grounding-based implementation of the DFA (GDFA)

One way to reach a more specific implementation of the *DFA* is to replace *Determination* not with a pluralist claim but with an *anti*-pluralist claim, namely one or the other of the following:

Determination monism: there is exactly one determination relation, or

Determination priority monism: there is exactly one most fundamental determination relation (see my 2017, §§2.3-2.5).

Both resulting views are versions of what Wilson calls the "Grounding-Based Approach," and what I'll call the Grounding Determination First Account (*GDFA*).

While I will not explicitly discuss the *GDFA* any further—it has its own defenders contributing to this issue!—I do insist upon not only saying, but **SOMEWHAT LOUDLY SAYING**, that it is a version of the *DFA*. 'Groundhogs' can and do argue with both Wilson and I about the pluralism, but they agree with me about the basic overall picture according to which fundamentality arises from determination.

3.3 The pluralist implementation of the DFA (PDFA)

Next, instead replace the *DFA*'s noncommittal *Determination* with a pluralist one, yielding the unsurprisingly named

Pluralist Determination First Approach (PDFA):

1. *Determination Pluralism*: there are multiple distinct determination relations.⁸
2. Rejection of *Primitivist Absolute Fundamentality* in favor of a definition of absolute fundamentality in terms of the metaphysical determination relations committed to in 1),

and

3. Rejection of *Primitivist Relative Fundamentality* in favor of a definition of 'more fundamental than' and cognates in terms of the metaphysical determination relations committed to in 1).

Like the *GDFA*, the *PDFA* is both more committal and more controversial than the weaker *DFA*. But it is still pretty schematic, because I have purposely left room for competing implementations.

There could be—I hereby invite there to be!—different versions that disagree about matters such as which relations really are determination relations, what exactly it takes for something to count as a determination relation, or on how exactly the reduction of either absolute or relative fundamentality to determination relations goes. The details of *my* particular reduction are not included (2017, especially chapters 5 and 6). Indeed, I have even used the label 'determination' instead of my more idiosyncratic 'building' in an effort to welcome others into my tent.

⁸ The careful reader will note that this characterization of *Determination Pluralism* is compatible with the characterization of *Determination Priority Monism* just above (and 2017, 22–28). I could reformulate *Determination Pluralism* to conflict with *Determination Priority Monism*, presumably by having it say that there are multiple equally fundamental determination relations. Maybe that is the right move. But the issue isn't completely straightforward, and this is not the place to work out the best places to hang the labels.

At stake is the classification of views according to which a) there are multiple distinct determination relations, but b) only one is primitive, and c) the primitive one serves as some sort of *common component* of the derivative ones. What is tricky is that there are views of this shape that feel definitely monist, and others that feel less so. Indeed, there is a view of this shape that most groundhogs would be happy to endorse, and a view of this shape that at least one prominent groundhog would deny.

Here's the one that groundhogs would endorse: the view that results from conjoining commitment to primitive grounding with a willingness to countenance abundant relations. That quickly yields multiple determination relations: there is the primitive one of grounding, and various derivative ones that come along on the cheap: grounding-on-Mondays, grounding-on-Tuesdays, and so on. These derivative determination relations wear on their sleeve the fact that they have grounding as a 'common component', but a way to explicitly bring it out is to note that all of them are such that, for any x and y , if x bears one of them to y , then x grounds y .

Here's a more interesting and more controversial view that shares the relevant shape: there's the primitive relation of grounding, and there are also derivative determination relations of composition, functional realization, set-formation, etc., all of which have grounding as some sort of common component in the same sense as the previous paragraph: if x bears one of the derivative determination relations to y , then x grounds y (or at least the fact that x exists grounds the fact that y exists). I have pointed to this possibility before (2017, §§2.4–2.5 and 58–9), but I don't know of anyone who has explicitly defended it. Jonathan Schaffer is committed to denying it. His 2010 defense of the claim that the single fusion of everything—the Cosmos—grounds everything else despite being mereologically complex turns on the assumption that composition does *not* have grounding as a component in the sense explored here.

3.4 The Bennettian implementation of the PDFA (the BPDFA)

Finally, I formulate an even more specific version of the *PDFA* that does include other claims particular to me. I will not bother including every relevant thing I said in *Making Things Up*, though, because I only want to highlight a couple of specific aspects that especially matter to my dispute with Wilson. For the purposes of this paper, the following very incomplete statement of my view will do:

The Bennettian Determination First Approach (BPDFA):

1. *Determination Pluralism*: there are multiple distinct determination relations.
2. Rejection of *Primitivist Absolute Fundamentality* in favor of characterizing fundamentality in terms of ‘independence’. More specifically, the view involves both
 - i) a cluster of definitions of various flavors of absolute fundamentality indexed to particular relations D committed to 1), as follows:
for something to be fundamental_D—i.e. independent_D—is for it not be D ’d by anything.⁹
 - ii) a definition of truly absolute fundamentality that quantifies over the indexed notions of fundamentality: to be fundamental full stop is to be fundamental in *all* the indexed ways.¹⁰

and

3. Rejection of *Primitivist Relative Fundamentality* in favor of a definition of ‘more fundamental than’ and cognates in terms of the determination relations in 1), one mere *fragment* of which is the following:

$D \rightarrow MFT$: If x at least partly determines y , then x is more fundamental than y .

(Note that this is a sufficient *but not necessary* condition on one thing’s being more fundamental than another.¹¹)

With both the generic *DFA* and the more specific *PDFA* and *BPDFA* in hand, I can finally assess Wilson’s argument for the *FFA*, the Fundamentality First Approach.

4. Wilson’s appeal to ecumenicality

As I have already noted, Wilson’s argument for the *FFA* is a classic theoretical cost/benefit analysis; she thinks it offers more for the money than the *DFA* does. As always, the money is ontology. But what is the ‘more’ here that the *FFA* is supposed to

⁹ For example, for something to be mereologically fundamental—usually called ‘simple’—is for it not to be composed of anything.

¹⁰ Equivalently, we can instead quantify over the determination relations: x is fundamental full stop \equiv_{df} for all y and all determination relations D , $\sim y D x$. Both formulations say that a thing is fundamental full stop if nothing determines it, in any way.

¹¹ See my 2017 chapter 6 for lengthy discussion of how to fill out the rest of the characterization. There, I call the sufficient condition the $B \rightarrow MFT$ principle; here, I have simply swapped the ‘B’ for ‘building’ for ‘D’ for ‘determination’.

offer? While this kind of argument usually appeals to explanatory or predictive power, Wilson appeals to a different theoretical virtue—ecumenicality. Her claim is not that the *FFA* *explains* or *predicts* more with the same or fewer ontological commitments as the *DFA*, but rather that it *allows* or *accommodates* more. That is, she thinks the *FFA* is compatible with a wider range of views about the world’s metaphysical structure: views about what is fundamental, and what more fundamental than what.

In §5, I will enumerate the particular patterns of determination and fundamentality that Wilson wants to accommodate. In §6, I will assess whether Wilson is right that the *DFA* is incompatible with them, and in §7 I will assess whether she is right that the *FFA* does not have to pay in parsimony dollars for allowing them. (Spoiler: no to both.)

But before getting into those weeds, I want to address the question of whether ecumenicality can really be appealed to here. Is it a theoretical virtue at all? While I do agree with Wilson that ecumenicality should play a role here, I don’t think it is obvious that it should. So this section takes a brief pause to shine an inquisitive spotlight on ecumenicality—and hopefully to shine it further into the darkness than I did in my previous discussion of the issue (2017, 32-8).

The problem with ecumenicality is that it isn’t considered a theoretical virtue in *science*. We don’t expect scientific theories to accommodate all data that has ever been put forward, and we certainly don’t expect them to accommodate *contradictory* data. If different experiments yield contradictory data, scientists need to figure out what has gone wrong: maybe one of the experiments was flawed, or maybe there is a way to understand the results so that they are not contradictory after all. But no one thinks a scientific theory gets points for being compatible with data that cannot all be correct. So why should a theory of metaphysical structure?

I actually think there is an answer to this question. I am sympathetic to the thought that ecumenicality has a role to play in choosing among theories of metaphysical structure, and indeed explicitly aimed for some degree of it myself (2017, 15-16; 2019a, 287-288; 2019b, 478). I think there are two important differences between scientific theories and theories of metaphysical structure that make sense of the different role of ecumenicality.

The first is that unlike the targets of typical scientific theories, determination and fundamentality are *toolbox notions* that are used to formulate theories of reality (Bennett

2016, 32-33). There is something to be said for the idea that toolbox notions (others include ‘property’, ‘cause’, ‘event’, etc.) ought to be deployable in the formulation of a variety of theories regardless of the truth-value of those theories. This seems to be Wilson’s thought too, in her approving quotation of Fine (ms 8-9). I’m not entirely sure how much weight this idea can bear, but it does belong in the mix.

The second relevant difference between science and metaphysics is an epistemic one. The point of ecumenicality is to *err on the safe side* when we are uncertain about the legitimacy of the purported data. The better our epistemic access to the target phenomena, the less we need to be ecumenical about what the correct data is. And it can at least be argued that we have better epistemic access in the typical scientific case than in the case at hand.

In the former, the data can be empirically verified, perhaps by checking the instruments or repeating the experiment. Not so with theories of metaphysical structure. Here, the ‘data’ Wilson wants to accommodate are *possibilities*—ways in which determination relations can hold. But epistemic access to possibility is famously fraught. It’s not like we have, say, seismograph readings that show us that determination can or cannot hold symmetrically. All we can do is rely on our usual non-empirical philosophical tools, notably conceptual analysis and cost/benefit reasoning, and neither of them can justify dismissing the alleged possibilities *out of the gate*.

As for intuitions and conceptual analysis: I can say that determination seems pretty asymmetric to *me*, and Wilson can say that it doesn’t to *her*, nor to the members of certain entrenched religious traditions. I can say that the fact that someone believes that determination can hold symmetrically doesn’t show that it really can, any more than the fact that someone believes that not everything is identical to itself shows that identity really is not reflexive (2017, 36). And very quickly we are either arguing about whether conceivability entails possibility, or about what it takes to properly conceive something, but either way all the players have just landed on an absolute tarpit of a square. We all lose our turns in perpetuity until someone gives up and knocks the gameboard over.

And while cost-benefit reasoning is absolutely relevant to the question of whether the alleged possibilities should be taken as genuine, it can’t be used to dismiss them *out of the gate*. We need to see what they cost first. And the way to do *that* is

suppositional reasoning: the way forward is to temporarily assume that the data are legitimate, that the alleged possibilities are genuine, and see how much this assumption costs. This is what I will do in what follows.

In short: ecumenicality does indeed have a role here that it does not have in simple scientific cases, because we don't have good epistemic access to the data that is suitably independent of the cost-benefit analysis itself.

All that said, though, it is important to be clear that agreeing that ecumenicality counts as a theoretical virtue in this context decidedly does *not* require agreeing that a theory of metaphysical structure is more likely to be true the more ecumenical it is. This is a general point about all theoretical virtues *V*: more *V* is not always better. Ontological simplicity is a virtue, but it is not the case that the simplest theory is the most likely to be true. “Nothing exists” is maximally simple, but it is not a great theory because it scores so poorly on *other* theoretical virtues like predictive power. Similarly for ecumenicality.

5. The alleged possibilities

It is finally time to get Wilson's ‘data’—the patterns of determination she takes to be genuinely possible—on the table. Again, the way forward is to start by assuming she is correct, and seeing what it takes to accommodate them.

Symmetry and Reflexivity: it is possible for determination to hold symmetrically and reflexively,

Fundamental yet Determined: it is possible for something to be simultaneously absolutely fundamental and partly determined, and

Priority Flip: it is possible for different instances of the same determination relation to be associated with different directions of priority. That is, at least some determination relations *D* are such that it is possible for some *a* and *b* to be such that *Dab* and *a* is more fundamental than *b*, and some other *c* and *d* to be such that *Dcd* and *d* is more fundamental than *c* (ms 14-15).

The remaining questions are whether it is really true that the *DFA* cannot accommodate these alleged possibilities (§6), and whether it is really true that Wilson's *FFA* is no less ontologically parsimonious than the *DFA* (§7). These sections are more-or-less independent of each other, and either alone constitutes a serious challenge to Wilson's cost-benefit argument.

6. What the *DFA* says about the alleged possibilities

In this section I argue that the *DFA* can handle more of the above list of alleged possibilities than Wilson thinks. More precisely, I will argue (§6.1) that while no version of the *DFA* can or should accommodate the third entry on the list, it can nonetheless handle the intuition *motivating* that entry. I will then argue (§6.2) that while the remaining items on the alleged possibility list are indeed incompatible with my own *BPDFA*, they are not incompatible with the *DFA* full stop. I turn to tallying the ontological costs in §7.

6.1 *The DFA indeed prohibits priority-flipping*

Start at the bottom of the §5 list, with the alleged possibility of priority-flipping. This is Wilson's claim that different instances of the same (proto)determination relation can differ in which side is more fundamental. On her view, the (proto)determination facts simply do not settle the relative fundamentality facts (ms 14-15).¹²

Wilson is quite right that the *DFA* cannot allow this kind of priority-flipping. Nor should it. Priority-flipping contradicts the core idea of the *DFA* in any of its forms, namely that the determination facts *do* settle both the relative and the absolute fundamentality facts. Nothing else has anything to do with fundamentality, and fundamentality is not primitive. Priority cannot flip around between instances of a single determination relation.¹³ The *DFA*, in short, needs to bite the bullet on the impossibility of priority flipping.

But this is not a very big deal, because the *DFA* can in fact make perfect sense of the *cases* that Wilson invokes to motivate belief in the possibility of priority-flipping (ms 10 and 28). She offers two kinds. One is what I'll call a *disagreement case*: a case in which reasonable philosophers disagree about which side of a seeming determination relation is more fundamental. Is it, for example, the whole fused Cosmos, or the mereologically

¹² Recall that Wilson formulates *Pluralist Metaphysical Dependence* in a way that requires the "backdrop specification of what is absolutely fundamental". Without it, she thinks that relations like composition or realization or the determinate/determinable relation are not quite determination relations at all.

¹³ Can two *different* determination relations generate a different version of priority-flipping? That is, can two different determination relations D_1 and D_2 hold in opposite directions between the same entities so that the associated indexed notions of relative fundamentality hold in opposite directions as well? That is, can it be that a is more fundamental than _{D_1} b , but b is more fundamental than _{D_2} a ? Probably, but if so, a general notion of *more fundamental than* reached by existentially quantifying over determination relations would not be asymmetric even if the individual relations are. See 2017 §2.5.

simplest atoms? The other is what I'll call a *true flipping case*: a case in which a (putatively respectable) philosophical view says that a seeming determination relation can hold in both directions of priority. Here, Wilson approvingly cites Jonathan Schaffer's claim (2010, 44) that "a Monist can maintain both that the Cosmos is prior to its parts, and that the parts of a table are prior to the table" (ms 10). It will be handy to have a label for this view, so I will call it 'bidirectional monism'.

I'm not sure why disagreement cases are supposed to support the possibility of priority-flipping. Maybe my realist underwear is showing, but I would have thought the natural way to read disagreement cases is as involving competing and contradictory theories about the metaphysical structure of the world—theories that cannot both be true. I therefore do not think anyone needs to allow for the *truth* of both atomism and monism. And I do not see why making sense of the *debate* about those two theories requires saying that sometimes parts are more fundamental than their wholes, and sometimes wholes are more fundamental than their parts. That work is only done by the true flipping cases, of which exactly one has been offered: the view of the bidirectional monist.

But, regardless, the *DFA*—and the *PDFA*, and even the *BPDFA*—can make perfect sense of both disagreement and her true flipping case. The key is to realize that the *DFA* also has room for ecumenicality, notably by accommodating different views about *which relations really are determination/building relations* (see 2017, 15-6). Different *DFA*ists can perfectly well disagree about whether it is composition, decomposition, or neither that is a determination relation. An atomist *DFA*ist thinks composition is a determination relation. A unidirectional monist *DFA*ist—who thinks that posteriority uniformly flows from the fundamental Cosmos to its immediate parts, and then from those things to their immediate parts, etc.—thinks that it is instead *decomposition* that is the determination relation. And a bidirectional monist *DFA*ist needs to claim that *neither* composition *nor* decomposition are determination relations. Indeed, this is how I have always understood 2010-era Schaffer, who thinks of grounding as the only determination relation, and denies that composition needs to march in step with it.

In short, the *DFA* makes sense of disagreement cases and allows for the possible truth of bidirectional monism, even though it does *not* allow for the possibility of priority-flipping in the particular sense defined. The *DFA* doesn't need priority-flipping to do the work.

6.2 The DFA does allow the other alleged possibilities laid out in §5.

So much for priority-flipping. The remaining alleged possibilities on Wilson's list are reflexive determination, symmetric determination, and something's being partly determined and yet also fundamental. Here I say: the generic *DFA* can perfectly well allow these. What does *not* allow them is my 2017 way of implementing the *DFA*—i.e. the *BP DFA*. That is, what rules out the alleged possibilities is not the core idea that both absolute and relative fundamentality are reducible to patterns of determination. It is instead the specific way in which I in particular proposed to do it.

Before I unpack this claim in more detail, let me note that the *BP DFA*'s incompatibility with these putative patterns of determination was neither unforeseen nor unintended. I explicitly called attention to the fact that my view did not allow either reflexive/symmetric determination (2017, §3.2) or determined fundamentalia (11–12; 64–5). The task at hand is simply to more explicitly explain what commitments of the *BP DFA* rule these out, and to articulate a different version of the *DFA* that jettisons them. There are two, both of which I highlighted in my §3.4 presentation of the *BP DFA*.

One is my characterization of absolute fundamentality as independence—the claim that to be fundamental is to fail to be determined, at all, by anything. (The extra wrinkle about indexed vs. quantified notions will no longer concern us here.) This immediately rules out the existence of fundamental entities that partly or fully determine either themselves or each other, as well as the existence of fundamental entities that are even partly determined by anything else (i.e., the strongly emergent).

The other is the *BP DFA*'s reliance upon the $D \rightarrow MFT$ principle as a piece—only a piece!—of the reduction of the *more fundamental than* relation. Recall that this principle, which Wilson rejects, says that if x at least partly determines y , x is more fundamental than y . This conflicts with both strong emergence and symmetric/reflexive determination. To see the problem for strong emergence, let e be a strongly emergent entity, and b some base phenomenon that partially determines e . $D \rightarrow MFT$ entails the impossible claim that b is more fundamental than the absolutely fundamental e . To see the problem for symmetry and reflexivity, let some a and b mutually determine each

other.¹⁴ $D \rightarrow MFT$ entails both that a is more fundamental than b and that b is more fundamental than a , which is again impossible.

So what rules out Wilson's desired possibilities is the $D \rightarrow MFT$ principle and the definition of absolute fundamentality as independence, neither of which are required by the *DFA* proper.¹⁵ Different *DFA*ists, united by the project of reducing absolute and relative fundamentality to patterns of determination, can disagree about how exactly such reductions should go.

Here is a proposal for a different version of the *DFA*—call it the *WPDFA*—that is compatible with Wilson's desired possibilities. It replaces the two problematic principles with the following:

*Independence**: to be absolutely fundamental is to be independent*, where x is independent* $\equiv_{df} x$ is not partly determined by anything **that is not itself partly determined by x** .

$(D \rightarrow MFT^*)$: If x is part of a minimally complete determination base for y , **and it is not the case that y is part of a minimally complete determination base for x** , then x is more fundamental than y .

These commitments both fit squarely with the *DFA* approach and are perfectly compatible with symmetric/reflexive determination and the existence of absolutely fundamental entities that are also determined. (This spells out in more detail a point I have made before: 2017, 136; 2019c, 519-520.)

To see this, consider again the mutually determining pair a and b .

*Independence** entails that both a and b are absolutely fundamental despite being determined, and $D \rightarrow MFT^*$ does not entail the incoherent claim that they are each more fundamental than the other. Or consider strongly emergent phenomena, which are

¹⁴ If $a \neq b$, this is a problem case for symmetric determination; if $a = b$, it is a problem case for reflexive determination.

¹⁵ These really are the culprits, even though there are a couple of extra claims in the background of the arguments of the previous paragraph. These extra claims are that i) the *more fundamental than* relation is asymmetric and irreflexive (needed to generate the conflict between $D \rightarrow MFT$ and asymmetric/reflexive determination), and ii) nothing can be more fundamental than something absolutely fundamental (needed to generate the conflict between $D \rightarrow MFT$ and strong emergence). But these 'extra claims' are not an optional part of my *BP DFA* that could be jettisoned from other versions of the *DFA*. They can't be jettisoned from *any* account of metaphysical structure. They are indisputable, and do not even have anything to do with the nature of fundamentality or metaphysical structure. They are just instances of universal features shared by comparative relations of the form *more F than* or its cognate *F-er than*.¹⁵ All such relations are asymmetric and irreflexive, and are such that nothing can be more *F* than something that is *F* to a maximal degree. Nothing can be more expensive or taller than itself, nor more expensive/taller than the most expensive/tallest thing. (This is compatible with there not being a most expensive or tallest thing.)

supposed to be both fundamental and one-way partly determined. Independence* provides a natural way to understand this: what is distinctive about the strongly emergent is that while they are *partly* determined by their bases, they are not *fully* determined by anything at all.¹⁶ Strong emergence in this sense is also compatible with the $D \rightarrow MFT^*$ principle. Strongly emergent phenomena never have minimally complete determination bases, so their partial bases never meet the antecedent of $D \rightarrow MFT^*$. We are therefore not stuck with the absurd claim that the base that partly determines the emergent, absolutely fundamental entity e is more fundamental than e .

Let me be super-clear: the *WPDFA* is *not* Wilson's view. It is not equivalent to the *FFA*, because it takes neither absolute nor relative fundamentality as primitive (and defines them by means of principles that Wilson would reject). Rather, the *WPDFA* is my own invention, concocted in order to show that *the DFA framework can give Wilson most of what she wants*. And really the *WPDFA* is just an example; there may be other ways to flesh out the *DFA* to allow for Wilson's alleged possibilities. But the existence of *any* way to handle the cases shows that the problem for cyclic determination and strong emergence is not the *DFA* full stop, but the particularly Bennettian 2017 implementation thereof.

Unfortunately, I do not have the time or space here to compare the costs and benefits of the *WPDFA* and the *BPDFA*. The question at issue would be whether or not I was right about the importance of preserving the $D \rightarrow MFT$ principle (2017, §3.2.2), given the availability of the alternative I have just suggested. But for the rest of this paper, my focus will remain on the battle between the generic *DFA* and Wilson's *FFA*, rather than in-fighting between different *DFA*-ists.

Together, §§6.1 and 6.2 almost entirely erase the pool of cases that the *FFA* can accommodate but the *DFA* cannot. The only thing no version of the *DFA* can allow is priority-flipping between instances of a single determination relation. But the only reason we have been given to believe that we *should* allow that is that we *must* in order

¹⁶ While Wilson does not quite say this here, it is consonant with her italicizing 'partly' in characterizing strong emergence as "some goings-on are both fundamental and *partly* metaphysically dependent on other fundamenta" (e.g. p.8). It is also consonant with her more detailed treatment of strong emergence elsewhere (2021). There, she emphasizes that strongly emergent phenomena have novel causal powers not possessed by the base. Presumably, the unifying thought is that nothing fully determines the fact that the strongly emergent phenomena have these powers.

to allow the possible truth of bidirectional monism. Which is not true: the *DFA* can allow the possible truth of bidirectional monism without allowing priority-flipping.

Thus far, things are not looking good for the *FFA*, which offers little that the *DFA* cannot also provide. It is time to compare the parsimony of the two approaches.

7. Reckoning parsimony

So what are the costs of these theories? How many aspects of our accounts of metaphysical structure need to be taken as themselves fundamental?¹⁷ There are three main places where dedicated primitives could be lurking:

Absolute fundamentality: what is it for something to be fundamental?

Relative fundamentality (= ‘direction of priority’): what is it for one thing to be more/less fundamental than another?

Demarcation of determination: what makes a relation count as a determination relation?

These are the main factors that settle a theory’s primitivity score. I will look at what the two competing strategies have to say here, starting with the *DFA*.

7.1 *The DFA’s primitivity score depends on how it answers the demarcation question*

The *DFA* reduces both absolute and relative fundamentality to patterns of determination relations, and takes connecting principles like $D \rightarrow MFT$ and $D \rightarrow MFT^*$ to be definitional truths rather than primitive facts. So the only potential locus for primitives is in the determination relations themselves, and would be reflected in *Demarcation*. And while this may be the only potential locus, it is a serious one. What makes something count as a determination relation in the first place? Does the *DFA*-ist need to appeal to some primitive determinative power? The short answer is “maybe”.

Here’s the longer answer. I have answered the demarcation question by saying that determination relations are_{df} asymmetric irreflexive necessitating(ish¹⁸) relations that license a certain kind of generative talk, namely talk involving terms like ‘because’ and ‘in virtue of’ (2017, chapter 3). It is this last clause, about generativity, that is at stake here. Crucially, I intentionally formulated it to be about *talk* or *claims*, because this is neutral between different possible stories about what underlies the truth of that talk

¹⁷ This formulation of the parsimony desideratum favors the Laser over the Razor (Schaffer 2015, Bennett 2017, ch 8).

¹⁸ See 2017, §3.3.

(2017, §3.4 and 184-185). I pointed out two possible answers that lie on opposite ends of a spectrum, with room for positions in between.

At one end of the spectrum is the claim that there is no story to be told—that there indeed is some kind of primitive generativity, so it's just primitive which relations that meet the formal requirements are determination relations. A version of the *DFA* with n determination relations thereby has n primitives. The *GDFA* would typically be understood as a view of this sort—one that takes grounding to be the only determination relation, and thus has one dedicated primitive.¹⁹ A view that says there is more than one determination relation, but only one primitive one—perhaps which is somehow implicated in all the rest—would also gain just one dedicated primitive here.

At the other end of the spectrum is the view that generativity is purely conventional. The idea would be to say that there are, as a purely worldly matter, various asymmetric irreflexive necessitating(ish) relations. What is conventional is which of those permit us to truly or aptly engage in generative talk. The picture I have in mind here is modeled on the kind of conventionalism about modality floated by Ted Sider (2003, §4.2). He suggests that true claims get carved up, non-conventionally, by subject matter: there are mathematical truths, mereological truths, real estate truths, cooking truths... Then convention swoops in and dictates that some but not all of those categories are such that all of their truths are necessary. Mathematical and mereological truths go on the list, and real estate and cooking truths do not. Similarly here. Why is set formation rather than set membership—both asymmetric irreflexive necessitating relations—‘in the club’? Just because we decided to include it. On *this* approach, the *DFA* has no new primitives at all.

So the official characterization of the *DFA* doesn't settle exactly how ontologically costly it is. (I consider this to be a desirable dose of ecumenicality, but I realize that most readers will prefer the term ‘cop-out’.) For the task at hand—calculating the *DFA*'s primitivity score—the consequence is that we are left with a range rather than a precise answer. A version of the *DFA* with n determination relations will have a primitivity score somewhere between 0 and n (inclusive).

¹⁹ Wilson seems to think views like this have to postulate distinct primitives to fix the priority of each instance of every determination relation. That's not right. They just need to deny that there are any determination relations other than Grounding. Their view is that composition, for example, is not a determination relation and has no direction of priority.

Wilson thinks that I'm too much of a realist to endorse the conventionalist answer, and too much of an anti-Groundhog to endorse the other extreme. This is not a crazy thought, which is perhaps why I have never in fact taken a stand.

7.2 *The myriad costs of the FFA*

Wilson's *FFA* has the same three potential sources of (hiding places for?) primitivity: absolute fundamentality, relative fundamentality, and the determination/small 'g' grounding relations themselves. I will look at each of these in turn.

7.2.1 How to count the cost of *Primitive Absolute Fundamentality*

Wilson of course embraces the claim that "the primitive aspect of *Primitivist [Absolute] Fundamentality* constitutes an ontological cost of some sort." She counts it for one point in the scoring, calling it her "one primitive posit" (29).

I think the cost is somewhat higher than she suggests. To claim that absolute fundamentality is itself fundamental is to say that it cannot be fully defined in any other terms. But it is also to say that it is fundamental *which things are fundamental*. That is, if *a* is fundamental, it is also fundamental *that a* is fundamental.²⁰ So for each fundamental entity she posits, she also has to posit a fundamental fact.

Some care is required here, because the precise number of fundamental facts and entities will of course depend on the choice of substantive 1st order metaphysical theory about the metaphysical structure of the world. Here it is important to remember that neither my *DFA* nor Wilson's *FFA* is a theory of that kind. Rather, they are *frameworks* in which to formulate such theories. (That is why Wilson aims for ecumenicality as discussed in §4.) Different 1st order theories, such as Wilson's recurring example of atomism and Schafferian monism, obviously take on different ontological commitments, but this needs to be filtered out in order to compare the commitments of the frameworks. And my claim here does just that. Quite generally, the *FFA*-ist is, and the *DFA*-ist is not, committed to there being an extra additional fundamental fact for each fundamental entity posited by a 1st order theory. A theory according to which

²⁰ I want to say that Wilson's claim means that there is nothing in virtue of which anything is fundamental, but this unfairly relies on understanding fundamentality as independence.

there are n fundamental entities has n fundamental commitments according to the *DFA* and $2n$ fundamental commitments according to the *FFA*.

Thus it's somewhat misleading to treat *Primitivist Absolute Fundamentality* as counting for one point towards the *FFA*'s parsimony score. The ontological cost is higher than Wilson has let on.

7.2.2 Wilson on relative fundamentality (the direction of priority)

Still, one might think that the extra expense just incurred at the absolute fundamentality store could be counterbalanced by savings somewhere else, in particular over at the nearby *relative* fundamentality store. It is natural to wonder whether Wilson's *FFA* comes out on a par with a non-pluralist version of the *DFA* that takes that one determination relation to be primitive. This, of course, is the grounding-based view that I earlier called the *GDFA*. So the natural thought is that Wilson's one primitive (absolute fundamentality itself) and her primitive facts about what is fundamental are zeroed out by the *GDFA*ist's one primitive (a hyperintentional grounding relation) and his primitive facts about what grounds what.

Successfully pursuing this "it comes out even" strategy would require defending two claims:

- i) That, for any choice of 1st order theory about the metaphysical structure of the world, the *GDFA*-ist is committed to at least as many primitive grounding facts as the *FFA*-ist is committed to primitive fundamentality facts, and
- ii) That, for the same choice of 1st order theory, the *FFA*-ist is not committed to any new primitives in order to account for the relative fundamentality facts.

I don't know whether i) is true, but it does not matter because I have strong reason to doubt that ii) is. I just don't see how Wilson's *FFA* can get anywhere on the question of relative fundamentality.

Remember, the question is whether there is anything in virtue of which the facts about what is more fundamental than what obtain. *DFA*-ists like me have the following crucial item(s) in our toolbox: one or more directed determination relations, where the directedness—whether primitive, conventionally stipulated, or other—is part of what it takes for them to count as determination relations in the first place. *DFA*-ists like me also endorse the $D \rightarrow MFT$ principle—that if x determines y , x is more fundamental than y —as both partially definitive of 'more fundamental than' in English (linguistic mode), and specifying one kind of ground of a relative fundamentality fact (metaphysical

mode). Now, as I briefly noted earlier, this is by no means a *full* story; lots of things stand in the *more fundamental than* relation that do not stand in any determination relation (the electron in Spain and the skyscraper in New York City). But it is the utterly key piece of the puzzle, and the rest is largely a matter of sorting out how the pieces fit together. I offered a starter version (2017, chapter 6), and invite other *DFA*ists to fuss with the details.

Wilson is in a completely different position. For her, the task of accounting for relative fundamentality is *not* that of using a directed relation(s) in combination with other ontologically kosher ingredients to capture the entire relative fundamentality structure of the world. *Wilson also has to account for the directedness of instances of her non-directed relations.* Remember, she denies that her “small ‘g’ grounding relations” have a fixed direction of priority, instead insisting that priority-flipping is possible. She does not think the $D \rightarrow MFT$ principle—that if x partly determines y , x is more fundamental than y —is true of them.²¹ They are more aptly named *proto*-determination relations.

So, the only tools Wilson has are the array of proto-determination facts, and the primitive specification of what is absolutely fundamental. How can those two things settle the relative fundamentality structure of the world?

Wilson rightly points out that the stipulation of the fundamentals does generate some relative fundamentality facts, because all fundamental things are more fundamental than all nonfundamental things. This is true. Those relative fundamentality facts come for free with the comparative nature of *more fundamental than*, in exactly the same way that merely dividing a group of physical objects into the heaviest and the not-heaviest imposes a *heavier than* ranking upon some of them: namely, any pair such that one is among the heaviest and one is not.

But it does not impose a heavier-than ranking on all of them, of course. What I have said leaves totally open whether any of the not-heaviest things are heavier than any of the others. Similarly, so far we do not have an account of relative fundamentality relations among nonfundamentalia, such the fact that this silicon atom is more fundamental than that clay statue.

²¹ Wilson does allow that perhaps some of the relations, like set formation, do have a fixed direction of priority across their instances such that $D \rightarrow MFT$ is true of them. But she thinks that others do not, and that having one is no part of *what it is to be* one of these relations.

Wilson is fully aware of this (§2.2.1). And while she has in the past been skeptical that there could be an “algorithm” specifying how the relative fundamentality facts among nonfundamentalia are fixed, she embarks upon the project here (§2.2.1, ms 16-17). She suggests that her two building blocks—the primitive stipulation of what is absolutely fundamental, plus facts about how the small ‘g’ proto-determination relations obtain—do indeed settle facts about how the relative fundamentality relations obtain among nonfundamentals.

Unfortunately, however, what she offers falls well short of plausibility. Because the details get complicated, and this paper is already too long, I have relegated the details to an appendix. You’ll have to trust me: Wilson has not yet given us a successful *FFA*-friendly account of how a nonfundamental thing could be more fundamental than another, and therefore has not yet given us a full *FFA*-friendly account of relative fundamentality.

And I am not sure how she *could*, with the tools she has. Here is a rough gesture towards a transcendental argument that she cannot: a stipulation of what is fundamental plus a stipulation of how certain nondirected relations obtain just isn’t a very useful set of building blocks. We can even assume that the relational facts have modal import, so that we end up with a stipulation of what is fundamental plus a stipulation of what necessitates what. It is at this point largely unchallenged lore that this just isn’t enough for genuine determination. The fact that {Socrates} exists necessitates the fact that Socrates exists. Every arbitrary contingent fact, like the fact that I have two cats, asymmetrically necessitates any necessary fact such as $2 + 2 = 4$. Yet in neither case is the former more fundamental than the latter. Maybe Wilson is sitting on a secret way to avoid or embrace these familiar sorts of cases, and thus maybe she has a way to replace the starter account she offers here. But until then, she has no account of relative fundamentality relations other than the basic sorting into fundamental and nonfundamental. (In the appendix, I offer a more careful and detailed discussion of the particular modal proposal that Wilson appears to offer in §2.2.1.)

As it stands, then, Wilson’s *FFA* is like a pop-up book that has been taped shut. It must currently be treated as just not offering an account of facts about which nonfundamental entities are more fundamental than which.

Wilson could embrace this in either of two ways: she could deny that there are any such facts, or she could claim that they are primitive.

Claiming that no nonfundamental things are ever more or less fundamental than any others—that they are all equifundamental—would be pretty revisionary. It would go against folk wisdom²² as well as a lot of claims by both philosophers and scientists. Still, this is worth exploring as an option. Perhaps Wilson should double down on the flicker of skeptical resistance that one can sense within her heart.

Otherwise, she is committed to some kind of additional primitive here. And if she says *that*, the “zeroing out” strategy falls apart, and the *FFA* is up to its elbows in primitivity—where the *DFA* is at worst up to its knees.

7.2.3 How Wilson wants to demarcate the class of small-‘g’ grounding relations

This largely completes the parsimony showdown. The last remaining piece is the question of how Wilson wants to demarcate the class of small ‘g’ grounding or proto-determination relations. After all, this is where the *DFA*-ist has the opportunity to hide primitivity. And Wilson devotes §2.4 to a more detailed discussion of the demarcation question than anything she has given us in the past.

Still, I am not convinced that the demarcation question is as important for her as it is for me and other *DFA*-ists. After all, the current version of the *FFA* not only denies that the proto-determination facts settle the absolute fundamentality facts, but *also* ends up denying that the proto-determination facts plus additional, unconnected absolute fundamentality facts settle all the relative fundamentality facts. So these relations do much less work for the *FFA* than determination relations do for the *DFA*. It therefore matters less how exactly Wilson wants to demarcate the class.

Thus while she does try out some new ideas about this in her §2.4, I will not pursue this further or argue that Wilson gains yet more primitives here. I cannot resist inserting some complaints about her new appeal to internality into a footnote,²³ but

²² People sometimes suggest that priority talk is some special metaphysician’s tool. It is not. I can personally vouch for the fact that random people sitting next to me on airplanes have the relevant concepts, and uniformly believe that electrons are more fundamental than soda cans.

²³ Wilson tentatively suggests that “the metaphysical relations apt for serving as metaphysical dependence relations are internal relations” (ms 20). Alas, as someone who has written at some length about what all building or small ‘g’ grounding relations might have in common, I am puzzled as to why she thinks this would help.

The main problem with the appeal to internality is that is that even though all determination relations are internal, it is not the case that *only* determination relations are internal. *Taller than* is a canonical example. So a relation’s being internal is not sufficient for its being a determination relation, and thus is not an answer to the demarcation question. Demarcating the members of a class requires identifying something that all *and only* the members have in common.

otherwise I will leave it be. If Wilson ends up postulating primitive determination to more fully handle relative fundamentality, there won't be a substantive answer here anyway. And if she takes the somewhat badass bullet-biting route of both rejecting primitive determination *and* claiming that all nonfundamentalia are equifundamental, well, at that point she is probably safe to go back to her previous claim that "there is little terminological, metaphysical, or formal unity among the specific [small 'g' grounding] relations" (2014, 540).

8. The final itemized bill

Wilson says that her *Fundamentality First Approach* to metaphysical structure offers more bang for the buck than does the *Determination First Approach*, in either its Building-Based or Grounding-Based form. She says that her *FFA* comes out ahead in the cost-benefit comparison because it offers much greater ecumenicality at no additional ontological cost. I say this is wrong. The *FFA* offers a *smidge* more ecumenicality at a very high cost.

I argued in §§5 and 6 that the generic *DFA* can perfectly well allow reflexive determination, symmetric determination, and strong emergence. I even sketched a Wilsonian version, the *WPDFA*, as an illustration. What the *DFA* cannot be ecumenical about is whether a single determination relation can point in different directions on different occasions. That is all Wilson's *FFA* really buys: priority-flipping.

And at what cost? The *FFA* has a primitive notion of absolute fundamentality, a host of primitive facts about what is absolutely fundamental, *and* is committed to either postulating primitive determination or denying that any nonfundamental entity is ever more fundamental than any other. The *DFA* offers an account of both absolute and

It has long seemed to me that what is interesting about determination relations is not that they are internal, but that they are what I have called 'superinternal' (2011a) or 'one-sided' (2017, 193-195): roughly, that they obtain in virtue of only one of the relata.²³ Wilson can consider moving in this direction, but

A final, independent issue with Wilson's appeal to internality has nothing obvious to do with her *FFA* approach at all. It also doesn't turn on the differences between internality, superinternality, and one-sidedness. It is just this: answering the demarcation question by appeal to *any* of these notions constitutes an answer to the question of what grounds the grounding facts—a question that Wilson has elsewhere dismissed as a 'spandrel' question "generated entirely by the overly abstract nature of Grounding" (2018, 507). For example, if *R* is merely internal, and if *Rab*, then [the fact that *Rab*] obtains in virtue of the existence and nature of both *a* and *b*. If *R* is superinternal, [the fact that *Rab*] obtains in virtue of the existence and nature of *a*. These answers sure make the question of meta-ground look substantive, not illusory.

relative fundamentality in terms of one or more determination relations, where a relation's counting as a form of determination might be primitive and might be merely conventional. The *DFA* is clearly the more parsimonious theory. All told, priority-flipping is awfully expensive.

At the beginning of the paper, I suggested that Wilson was asking me to pay Rolls Royce prices for a car that isn't much better than the Toyota I already have. Now, at the end of the paper, I have earned the right to lean further into this analogy: she is asking me to buy a Toyota a lot like my own, but twice as expensive because it has been equipped with a wiper fluid reservoir made out of top-grade platinum. I don't need or want that, so will stick with what I have.

Instead, I invite Wilson to the *DFA* dealership to take my car for a test drive. The heated seats are nice in this weather, and we can bicker affably about option packages over vending machine coffee.

Appendix: Wilson's Account of the Direction of Priority Between Nonfundamentals

As I pointed out in §7.2.2, Wilson owes us a story about what if anything fixes the direction of priority between nonfundamental things—that is, about what if anything settles which nonfundamentalia are more fundamental than which others. She denies that the obtaining of various small 'g' grounding relations—proto-determination relations—by itself suffices to do this, and recognizes that a specification of what is absolutely fundamental will not by itself suffice either. She also denies that those two components *together* settle the direction of priority in any general way, as per her insistence on the possibility of genuine priority-flipping between instances of the same small 'g' grounding relation (see her treatment of bidirectional monism in §6.1 of my main article).

Yet she *does* think that the two together settle the direction of priority of an *instance* of a small 'g' grounding relation that holds between nonfundamentalia. She says things like, "the two components of Fundamentality First jointly enter into determining metaphysical structure" (ms 15) and "the direction of priority (if there is one) associated with an instance of a metaphysical relation capable of serving as a

metaphysical dependence relation is, either directly or indirectly, a function of what is antecedently primitively specified as fundamental" (15).

Wilson uses an example to show how this is supposed to work. I will present this as though it is an argument, because it will be handy to be able to talk about particular stages and premises, but really what it is supposed to be is a statement of how facts about what is fundamental, conjoined with facts about small 'g' grounding, *themselves ground* priority relations between nonfundamentals. Here it is (§2.2.1.2, ms 16):²⁴

- 1) Suppose that the *ffs* are fundamental, that the *ffs* fully compose *A*, and that *A* partially composes *B* (i.e., *A* is a proper part of) *B*. (*supposition*)
- 2) It is possible for the *ffs* to compose *A* without composing *B*. (*supposition*)
- 3) It is not possible for the *ffs* to compose *B* without composing *A*. (*from 1? or a further supposition?*)
- 4) The fact that the *ffs* compose *A* is itself more fundamental than the fact that the *ffs* compose *B*. (*From 2 and 3*)

Therefore *A* is more fundamental than *B*. (*From 4*)

Do note that these premises should be read as claims about named particulars rather than implicitly quantified general claims using variables. Remember, Wilson thinks the direction of priority is (at best) fixed instance-by-instance rather than relation-by-relation.

Premise 1 is just a stipulation about a case. I'm also happy to grant premise 2, because the possibility it states certainly seems to be left open by the stipulations in 1; the *ffs* could compose *A* in a world where no other proper parts of *B* exist. Finally, I'm also willing to grant the move from 4 to the conclusion. What I want to challenge are the source of premise 3, and the move from 3 to 4.

²⁴ Here is the passage, with insertions to mark my reconstruction of the argument, and with entailment language emphasized:

[premise 2] The holding of the parthood relation between the atoms [the *ffs*] and *A* does not require the holding of the parthood relation between the atoms and *B*; in fact, the holding of the parthood relation between the atoms and *A* is compatible with *B*'s not existing at all... [premise 3] By way of contrast, the holding of the parthood relation between the atoms and *B* does require the holding of the parthood relation between the atoms and *A*. [premise 4] The holding of the parthood relation between the atoms and *B* is *thus* posterior to the holding of the parthood relation between the atoms and *A*, and [conclusion] *so* the holding of the small-g relations between *A* and the fundamenta, and *B* and the fundamenta, associates a specific direction of priority with the parthood relation between *A* and *B*—namely, as running from part *A* to whole *B*" (16, emphases mine).

Objection 1: Wilson ought not take modal premise 3 to follow from compositional premise 1.

While premise 2 states that something is possible, premise 3 states that something is *not*: the *ffs* cannot (partly) compose *B* without also composing *A*. Where is this impossibility claim supposed to come from? Wilson doesn't explicitly say, but it sounds like she thinks it follows from premise 1. However, she cannot say that. The most obvious way to derive 3 from 1 requires an assumption that Wilson cannot make, and the problem will generalize to any other attempt to derive 3 from 1.

Here's that most obvious way to derive 3 from 1. Assume, as seems reasonable, that composition is factive in that necessarily, if the *ffs* partly compose something, the *ffs* exist. Further assume that composition is necessarily unrestricted, so that if the *ffs* exist, they compose *A*. These chain together nicely—if the *ffs* partly compose *B*, they exist, and if they exist, they compose *A*. Impossibility fact secured: the *ffs* cannot compose *B* without also composing *A*.

But Wilson cannot avail herself of this derivation, because she cannot appeal to unrestricted composition in this way. There are two reasons.

The first is that unrestricted composition is controversial. Plenty of people deny it, and indeed will claim that the compositional facts in 1 do *not* entail the impossibility claim in 3. They might say: let the *ffs* be some bricks that, in the actual world, fully compose the little pig's chimney and partly compose his house.²⁵ Those bricks could partly compose the house without composing the chimney; little pig could tear down his chimney and add a back porch. Now, clearly there are complications here that I can't pursue; I'm gonna put the lid *right back on* this can of worms. My point isn't that unrestricted composition is false. My point is merely that it is controversial, and that Wilson therefore cannot rely upon it without jeopardizing her own appeal to ecumenicality.

The other reason that Wilson cannot appeal to unrestricted composition here is not that it is controversial, but rather that regardless of its truth-value or popularity, it is a *fully general thesis about how composition works*. I therefore cannot see how it could be used to help settle the direction of priority of an *instance* of composition without settling the direction of priority of all instances. Indeed, I don't see how Wilson could appeal to *any* general thesis about the nature of composition here without undercutting the

²⁵ Yes, I know that bricks aren't fundamental. It's just a quick illustration.

possibility of priority-flipping. Yet I also don't see how anything less than a general thesis about the nature of composition could possibly get us from the stipulated compositional facts in 1 to the impossibility claim in 3.

The upshot is that Wilson cannot claim that 3 follows from 1 via unrestricted composition or any other such general thesis about how composition works. She should therefore instead treat the impossibility fact in 3 simply as *a further stipulation*. She should say that it is just part of the example that the *ffs* cannot compose *B* without also composing *A*.

There's nothing incoherent about this stipulation. The problem is instead that we are no longer being given what we were promised.

Objection 2: taking 3 to be an additional stipulation constitutes a bit of a bait-n-switch

Wilson said she was going to illustrate how a stipulation of what is fundamental, together with an instance of a determination relation like composition, could jointly settle which side of that instance of the relation is prior to the other. That is not what is now on offer. The current picture is one on which the relative fundamentality facts are settled by the facts about what is fundamental together with *additional modal facts that have to be independently stipulated*. Indeed, now I wonder whether the compositional facts are doing any work here at all. She starts off the discussion by calling attention to the differences in how *A* and *B* are "small-g generated by the fundamenta" (16), but that doesn't seem to be doing any work at all in getting to 3.

Objection 3: I don't understand why premise 4 is supposed to follow from premises 2 and 3.

Now let's evaluate the move to premise 4, which is a claim about which of two compositional facts is more fundamental than the other. It's supposed to follow from premises 2 and 3, each of which state modal facts. So even before getting into the weeds, we can see that the move here is from a modal claim to a relative fundamentality claim. I doubt I'm the only one whose spidey sense is tingling.

Here is the inference in a bit more detail. The conjunction of 2 and 3 says that it is possible for the *ffs* to compose *A* without composing *B*, but not possible for the *ffs* to compose *B* without composing *A*. This is a claim about the necessitation relations, or lack thereof, between two compositional facts. Letting '*F*₁' label the fact that the *ffs*

compose A , and ' F_2 ' label the fact that the ffs compose B , the conjunction of 2 and 3 can be rewritten as follows:

(2&3) it's possible for fact F_1 to obtain without F_2 , but not *vice versa*.

Or, equivalently,

(2&3) F_2 asymmetrically necessitates F_1 .

And then premise 4 says:

(4) F_1 is more fundamental than F_2 .

There are two serious problems with this inference from 2&3 to 4.

First, there are well-known difficulties inferring *determination* from asymmetric necessitation that certainly appear to carry over to inferring relative fundamentality from asymmetric necessitation. One comes from the literature on supervenience: any arbitrary contingent fact asymmetrically necessitates every necessary fact, but I don't really see that we should think that every contingent fact is more fundamental than every necessary fact. Another comes from Kit Fine on Socrates and {Socrates} (1994), though I will skip spelling out exactly how to import it here (see my 2017, 56).

Second, even if those issues are dismissed, Wilson is inferring relative fundamentality from asymmetric necessitation in the *other direction* than people used to think they could. The standard direction—the tempting though dodgy move—is from

x asymmetrically necessitates y

to

x is more fundamental than y .

That move is what the worry about necessary facts was supposed to challenge: any contingent fact asymmetrically necessitates any necessary fact, but it doesn't seem like every contingent fact has to be more fundamental than every necessary fact. Or consider the way that physicalism was standardly captured from the 1980s through the early 2000s, namely by an asymmetric necessitation claim or supervenience claim. The physical facts P necessitate the mental facts M , but not *vice versa*; the mental facts M supervene on the physical facts P , and not *vice versa*. People used to assume—incorrectly!—that these claims were a way of saying that the physical determines, and is thereby more fundamental than, the mental: because P asymmetrically necessitates M , P is more fundamental than M . But *Wilson* is saying that because F_2 asymmetrically necessitates F_1 , F_1 is more fundamental than F_2 .

Offering Wilson an alternative

All three of the above objections turn on Wilson's use of the modal facts in premises 2 and 3; this is what makes her discussion puzzling and unconvincing. So, what happens if we just expel the troublemakers? That is, what happens if we drop the modal facts altogether, and instead spell out—as she says she wants to—how an instance of a small 'g' grounding relation between nonfundamentals gets a direction of priority from *nothing but* the compositional facts and a specification of what is fundamental?

What happens is that it starts to become *real tempting* to say that the 'prior' or more fundamental side of the small-'g' relation is the one that is in some sense closer to the specified fundamentals. How is 'closer' to be measured? Perhaps by the number of small-'g' grounding steps between it and the fundamentals. Here's how this would go in Wilson's example: premise 1 entails that *A* is more directly grounded by the *ffs* than *B* is, that *A* is 'closer to the bottom', and thus more fundamental than *B*. The idea here is to say that relative fundamentality relations between nonfundamentalia are given by²⁶ their relative location in the small 'g' grounding structure *plus* what is for Wilson (not for me) something additional to that, namely a specification of what is absolutely fundamental.

Readers will not be surprised to hear that I am selling my own handmade goods here (2017, chapter 6). This is the strategy I pursued in 2017, chapter 6, except that for me what is fundamental is a component of the determination structure, not an extra set of facts.

The first thing to say about this kind of account is that it is harder than it looks to get it up and running, and I point to that chapter as a travel guide. (To give you a sense of the sort of questions that arise: what if there are no fundamentals and therefore the structure has no 'bottom'? Even if there is a bottom, is there a stable way to measure distance from it, or to count small-'g' grounding steps? What about reckoning the relative distance from the bottom of entities on different determination chains? And how does this talk of 'determination structure' interact with pluralism?)

But really the main thing to say about this kind of account is that it is definitely not Wilson's approach in her paper. My strategy does not invoke modal facts about the

²⁶ Or just *are*.

impossibility of certain determinative arrangements. I would happily share it with her, though, if it were not for the pesky fact that it is simply not compatible with her insistence on the possibility of genuine priority-flipping, and thus not compatible with her preferred understanding of bidirectional monism. (See §6.1 of the main text.) The whole thrust of the position I am dangling in front of her is that the (for her, independent) specification of what is fundamental plus the small 'g' grounding facts fixes the direction of priority. She denies that.

I think Wilson should chuck the unnecessary insistence on the possibility of genuine priority-flipping. I again invite her to explore the alternative road with me.

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