Plenitude, Coincidence, and Humility

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It is a persistent trope in period dramas that the most garishly extravagant character — the matriarch with all the feathers — is most concerned to trumpet their conservative virtues. And so too in metaphysics!

Fairchild (2019) advertised the *humility* of material plenitude, arguing that despite the profligate ontology of coincident objects it entails, the best version of plenitude is one that takes no stand on a range of nearby questions about modality and coincidence. Roughly, the thought is that plenitude says *only* that there are coincident objects corresponding to every consistent pattern of essential and accidental properties. Plenitude says — or should say — nothing about which patterns those might be, and so should be compatible with any reasonable hypothesis about which combinations of properties it is possible for something to have. I argued in the earlier paper that a particular formulation of the target view (*Global Plenitude*) has exactly that virtue. But like the many-feathered matriarch, Global Plenitude turns out not to be very humble at all. Most vividly, Global Plenitude is incompatible with an exceptionally compelling hypothesis about coincidence: that there are some things which coincide, but might not have. Scandal ensues.

Thankfully (as we know from the dramas) untangling a scandal can reveal a lot about the underlying character of the thing. Getting a handle on the shape of the problem for Global Plenitude paves the way for an attractive fix, but also puts significant pressure on our aspriations to 'humility'. In what follows, I recap and diagnose the problem for the old formulation (Section 2) and propose an improvement (Section 3). Along the way, I discuss a number of connected questions. Section 2.3 explores whether a plenitudinous picture of the world really does require that coincidence be contingent, and Section 5 asks whether plenitude allows for "nontrivial essences." (Roughly, nontrivial properties that are had essentially if at all.) I argue that both are genuine choice-points, yielding quite different pictures which are nonetheless compatible with what I take to be the characteristic ambitions of plenitude.

Both Global Plenitude and the new formulation I propose in Section 3 are what I'll call 'essentialist' varieties of plenitude. Briefly, and with a promise to return to the details: plenitude is

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sometimes expressed with the slogan "*there is an object for every modal profile"*. But we can fill out 'modal profile' in a number of different ways. In this paper —following, for example, Bennett (2004), Leslie (2011), and Fairchild (2019) — I begin by thinking of modal profiles as *patterns of essential and accidental properties*. But we could instead start by understanding modal profiles as modal 'paths', given by (perhaps partial) functions from (eg.) worlds to filled regions of spacetime, or worlds to suitable collections of properties. This approach yields what I'll call 'path' formulations of plenitude.[2] Consider, for example:

> **Path Plenitude.** For every function *f* from worlds to individuals in those worlds, there's an object whose coincidence path is described by *f*.

Where *f* describes o's coincidence path iff *o* coincides with *f(w)* wherever *f* is defined, and doesn't exist otherwise.

Although path approaches tend to be much cleaner, attempts at formulating essentialist varieties of plenitude can cast new light on a range of difficult questions. This paper takes a special interest in the ways that essentialist approaches to plenitude make vivid a kind of tension associated with the 'humility' idea above. But essentialist formulations also engage questions that are important even for the plenitude-denier. Among them: What are the minimal consistency constraints on modal profiles? Which properties can be had essentially, and which can be had accidentally?[3] Can the difference between non-plenitudinous pictures of the world and plenitudinous ones be captured by reference to *further* constraints on essences or modal profiles? My own suspicion is that, despite some messiness, the essentialist approach can help us make progress on each of these questions. Still, it is better to describe the world in a tidier way if we can. Here too the scandal uncovers some unexpectedly good news: in Section 4, I argue that the revised essentialist formulation turns out to be equivalent to Path Plenitude. Section 5 makes use of this result to discuss "nontrivial essences", and Section 6 concludes.

1 Plenitude

We're usually happy to acknowledge that ordinary objects can survive some changes and not others, and more generally that they might have been otherwise than they actually are. Most famously: the statue could have been painted a different color or placed on a different pedestal, but it couldn't have been a radically different shape. It would be destroyed by squashing, but not by repainting or relocation. This ring could have been carved with a different engraving, and might someday survive having portions of metal removed for resizing. We can trim the fringe on the caftan, or dye the entire thing, but it would be destroyed if it were wholly unraveled.

'Pluralists' say that at least some ordinary objects differ in these respects from *other* objects that they temporarily or permanently coincide with. The statue is made up of a lump of clay which, unlike the

[2] The 'path'-style approach is based on Hawthorne (2006) and on the *fullness* condition in Yablo (1987: 307) and Yablo (forthcoming). Other plenitudinous pictures are framed in different terms: for example, see Jago (2016) for a bundle-theoretic version of plenitude, Fine (1982, 1999) for a hylomorphic version, and Wallace (2014, 2019) for a version that treats objects as trans-world sums of modal parts. Dorr et al (2021) formulate their plenitude principles instead in terms of properties that (in one way or another) characterize objects. (See especially Chapter 11).
[3] See Spencer (2020) for a sustained discussion of the *many* challenges we face in trying to provide a principled characterization of the 'essentializable' properties.

statue itself, could survive all sorts of squashings and re-shapings. The royal signet could not have had a different engraving, while the piece of metal that constitutes both the ring and the signet would be destroyed if we removed a large enough quantity of gold. If a rogue restorer at the Costume Institute were to tie-dye it, we'd have an ugly caftan in the collection, but the designer garment would be destroyed.[4] Although these coincident things share many of their properties — like shape or color — they differ in whether they have those properties *essentially* or *accidentally*.[5] More briefly; they have different *modal profiles.*

Plenitude goes further. Wherever there is any object, there's a multitude of coincident things — at least one for *every* consistent modal profile. As Yablo (forthcoming) puts it: plenitude adds to mere pluralism about coincidence that coincident things "differ *as widely as possible*" in their modal properties; that "their modal profiles are as various as you like". The plenitudinous world is, in some sense, 'full to the brim' with coincident things.

We can fill out the details in a number of different ways. I am most interested in making good on the *essentialist* approach to plenitude, where an object's modal profile is a (partial) list of its essential and accidental properties. Bennett (2004)'s description of plenitude is perhaps the most straightforward illustration of the approach:

> "The story is really very simple. It is this: every region of spacetime that contains an object at all contains a distinct object for every possible way of distributing 'essential' and 'accidental' over the non-sortalish properties actually instantiated there. Each spatio-temporal region is, as my Australian friends would say, *chocka*." (354)

Her restriction to "non-sortalish" properties excludes things like modal properties (*possibly being tie-dyed*), as well as kind and sortal properties (*being a statue*). In the interest of temporarily setting aside difficult questions about which properties fit the bill, we can focus instead on the properties that are neutral with respect to coincidence:

> A property F is *neutral* iff necessarily, for all x and y, if x and y coincide, Fx iff Fy.[6]

Crucially, in what follows, I'll be carefully silent about how we fill out 'coincidence': the views discussed here are meant to be compatible with understanding coincidence as spatiotemporal coincidence,

[4] For the classic example, see Gibbard (1975), and see Paul (2010) for an overview of the puzzles of material constitution that lead to this kind of pluralism. Fellow plenitude-lovers may well take issue with some of the examples I use here — there's no party line on how widely applicable plenitude is to ordinary objects. Since each of pluralism and plenitude is a thesis about modal variation between coincidents, we could in principle be accept either only on the force of general commitments about existence and modality, and insist that ordinary objects are still nowhere to be found in the plenitude. The versions of plenitude I describe here are meant to be compatible with this, but I'm currently much more tempted to agree with Baker (2008) — an ontology that mentions neither screwdrivers nor walnuts would be alarmingly incomplete.

[5] Sometimes, when we say that a property is essential to something, we mean that the property is a part of its nature or 'real definition'. (See Fine (1994), also Roca-Royes (2011).) Since in the present context we are most interested in differences between the modal persistence conditions of objects, we can make do with the purely modal characterization of 'essence' and 'accident'. That is:

> *o* has a property F *essentially* iff o is *F* and necessarily, if *o* exists, *o* is F

And:

> *o* has a property *F accidentally* iff *o* is *F* and possibly, *o* exists and is not *F.*

[6] See Fairchild (2019) for the case for using 'neutrality' in our formulation of plenitude. Yablo (1987) suggests that these are the 'categorical' properties, and Dorr et al (2021) work instead with 'undiscriminating' properties.

mereological coincidence, or specialized property-sharing. I will throughout be assuming, though, that coincidence is an equivalence relation, and so in particular that necessarily everything coincides with itself.

Let's say that a modal profile *M* **based on *o*** is a partition of *o*'s neutral properties at *w* into subsets *E* and *A*. An object has a modal profile *M* iff it has every property in *E* essentially and every property in *A* accidentally. We can thus formulate a slightly more official template for plenitude:

> **Template.** Necessarily, for any object o and any good modal profile M based on o, there is something coincident with o that has M.

Instances of **Template** will specify how we're to understand the placeholder *'good'*.

Of course, some ways of filling out the template don't seem especially deserving of the label 'plenitude'. Bennett (2004) compares the paradigmatic 'wild bazillion-thinger' to the 'plenitudinous two-thinger'. The plenitudinous two-thinger says that "the only metaphysically possible combinations of modal properties are those that correspond to the sorts of things that we standardly recognize," and so "the principle of plenitude merely entails the existence of precisely those objects whose existence we typically acknowledge."[7] They thus appear to grant the *letter* of plenitude — that every good profile is instantiated — while insisting that the only "good" profiles are the ones corresponding to ordinary objects. Whether this yields two things or many, it still seems to miss something important about the spirit of plenitude. The restriction to "good" profiles in **Template** doesn't stand in for just *any* hypothesis about which modal profiles are possible, but is rather a placeholder for some kind of minimal consistency constraint on modal profiles.

We need *some* constraint to handle cases where, for example, a modal profile is ruled out by uncontested facts about which combinations of properties are possible. The statue has both the property *being gray* and the property *being colored*. But even the plenitudinarian won't say that there's something coincident with the statue that is *essentially gray* and *accidentally colored*, since it isn't possible for anything to be gray without also being colored.[8] At least as stated, the plenitudinous two-thinger's proposed restriction looks very different. Consider some ordinary case of destruction: squashing a statue or tearing too many pages out of a book. The plenitudinous two-thinger will grant that there could be something like the book that lacks a hundred pages, or something like the statue that is squished beyond recognition. What the plenitudinous two-thinger insists is not that the relevant combination of neutral properties is *impossible*, but rather that a modal profile describing something that possibly has that combination of properties is somehow no good. She appears to overstep by ruling out modal profiles that are unfamiliar but otherwise metaphysically well-behaved.[9]

We'll complicate all of this a bit below. But the contrast is at least instructive, since it illuminates an elusive desideratum for essentialist plenitude. We're looking for an account on which the stock of

[7] Bennett (2004, 356). See also Leslie (2011)'s discussion of the 'principle of limited variety'.

[8] This example from Bennet (2004, 357-358). Leslie (2011, 279) discusses a similar example: since *being blue* necessarily entails *being spatially extended*, nothing can be essentially blue and accidentally spatially extended. Fairchild (2019) discusses these cases at length.

[9] Compare this to a *spinozistic plenitudinarian* who has a *very* demanding picture of necessity, so that there are only a handful of ways the world could have been. Perhaps: insofar as no pages ever will be torn from this book, no pages *could* have been torn out. In such an impoverished modal landscape even a well-designed principle of plenitude won't guarantee its characteristic abundance. Thus, my worries about the plenitudinous two-thinger aren't about *quantity*: it could well turn out that on implausibly narrow views about possibility, some form of "two-thingerism" is still in the spirit of plenitude.

'good' modal profiles is (in some sense) as expansive as modal space allows, given the possible patterns of neutral properties. This is related to a further heuristic ambition of plenitude that I've elsewhere called 'ground floor humility' — henceforth, just 'humility'. In Fairchild (2019), I said that "a plenitude principle is *ground floor humble* if it is compatible with any reasonable hypothesis about the distribution of neutral properties through modal space." The thought was that plenitude is constrained only by what is possible — by what ways there are for things to be. A principle of plenitude should 'fill up' the world with coincidents as much as metaphysical possibility permits. The further 'humility' thought is that this is *all* that plenitude does: a principle of plenitude should remain wholly humble about what exactly it is that possibility permits. The two suggestions taken together tell us that the best principle of plenitude is one that says *nothing more or less* than that the world 'maxes out' modal variation between coincident objects.

There is something *really* attractive about this line of thought, but the lesson of much of what follows is that the many heuristic ambitions of plenitude are in a kind of tension with each other. I won't resolve that tension here, but my hope is to at least partially illuminate the different directions we're pulled in. The story begins with Global Plenitude.

2 Global Plenitude, Revisited

Recall that we're understanding modal profiles as partitions of neutral properties into those had essentially and those had accidentally. An absolutely minimal condition on good modal profiles, then, is that the essential properties must be closed under necessary entailment.

Officially, where *S* is the set of some *o*'s neutral properties and *M* is a profile <E,A> based on *o*, a minimal closure condition on E is:

> **Closure.** For any subset *F* of *S* and any property *G* in *S*, if *F* necessarily entails *G*, then if every property in *F* is in *E*, *G* is in *E*.

But this isn't quite enough. Fairchild (2019) contains a more extensive discussion, but we can see the basic problem with *Whimsy:*[10]

> *Whimsy*. Whimsy has a blue part (Bluesy) and a green part (Greenie). Whimsy is not a perfectly fragile object; it can survive some things being otherwise. But had anything been otherwise, Whimsy would have been entirely green.

Among Greenie's neutral properties are *overlapping Whimsy* and *being green*. Notice that *overlapping Whimsy* doesn't entail *being green* (witness; Bluesy). But although it is *possible* for something to have the former property while lacking the latter, nothing actually coincident with Greenie could have a modal profile according to which it essentially overlaps Whimsy and is only accidentally green. For something actually coincident with Greenie to be accidentally green, it would have to be possibly not green. But had the world been otherwise, everything that overlaps Whimsy would be green.

[10] This case appears in Fairchild (2019) as a challenge for *Merely Modal Plenitude*; see Section 3 and 4 for extensive discussion. Though note that there's a slippage in my recap of the case at the end of Section 4, where it should read: "In the third counterexample, although there are things overlapping Whimsy at other worlds, they are all green, so *overlapping Whimsy* non-locally entails *being green*."

In Fairchild (2019), I argued that cases like this motivate a world-relative notion of 'good'-ness, according to which the good profiles at w are those where E is closed under *non-local entailment.* Informally, nonlocal entailment at w is just like necessary entailment, except that we restrict our attention to every world *other than w.* More carefully, where:

It is otherworldly necessary that P at w *iff* at all worlds distinct from w, P.

Then:

A set F of properties nonlocally entails G at w *iff* it is otherworldly necessary at w that for all x, if x has every property in F, then Gx.

Whimsy illustrates the contrast between entailment and nonlocal entailment. There are properties F and G such that F doesn't necessarily entail G, because there's actually something that is F but not G. But had things been otherwise, it would have been that every F is G. In other words: F *non-locally entails* G.

The characteristic feature of global plenitude is closure under nonlocal entailment. Where again S is the set of o's neutral properties and M is a profile <E,A> based on o, that is:

Nonlocal Closure. For any subset F of S and any property G in S, if F nonlocally entails G at w, then if every property in F is in E, G is in E.

Global Plenitude also included an additional condition:

Essence Closure. If F necessarily entails being *essentially F*, F is in E.

Notice that where G is a property necessarily had by everything, both **Closure** and **Non-Local Closure** alone will already ensure that G is in E. Essence Closure ensures that if there are neutral properties that are *not* necessarily had by everything (ie. 'non-universal' or 'non-trivial' properties) such that they are had essentially if at all, those are also included in E. (This condition plays an important role in Section 2.2 and 2.3, and I discuss it extensively in Section 5.)[11]

The resulting formulation of plenitude is:

Global Plenitude. Necessarily, for any object o and any modal profile M based on o such that M satisfies Nonlocal Closure and Essence Closure, there is something coincident with o that has M.[12]

Consider Whimsy again: a modal profile according to which something essentially overlaps Whimsy and is accidentally green won't be closed under non-local entailment, and so isn't a *good* modal profile. So far, so good.

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[11] And so the suggestion in Fairchild (2019) should have been hedged: we need Essence Closure for location, materiality, and self-identity just in case those properties aren't necessarily had by everything.

[12] My presentation here is slightly different than in Fairchild (2019). For ease in later sections, I've separated the two closure conditions, and dropped the restriction to 'material objects'.

Unfortunately, there are very nearby generalizations of the Whimsy case that aren't handled by nonlocal closure, and so threaten to pose a serious problem for Global Plenitude. In Section 2.2, I present an argument (due to Cian Dorr) that global plenitude is inconsistent with the possibility of contingent coincidence, and show how it is an instance of a more structural challenge (much like Whimsy). First, however, I'll very briefly say why it might be at least a *little* surprising that global plenitude runs into problems of this kind, given some of the technical results I defended in earlier work. Readers less interested in interpreting the construction from Fairchild (2019) can skip to Section 2.2.

2.1 Global Plenitude and Humility

Cases like *Whimsy* are illustrative, but dangerous. They capitalize on partial characterizations of modal profiles and on a merely heuristic understanding of neutral properties. When it comes to neutrality, we can usually get by in cases by thinking about the properties that (eg.) co-located things have in common. But when the details matter, its important to remember that which properties are neutral is going to be *extraordinarily* sensitive to the facts 'on the ground' about coincidence. We're in a much better position to evaluate plenitude principles if we can construct models that fill out the picture, and make it possible to construct and check *fully* specified modal profiles. But models are also risky, because sometimes they hide secrets.

The defense of Global Plenitude in Fairchild (2019) rested in part on an argument that Global Plenitude is *ground-floor humble*. As we saw above, the heuristic idea was that a 'humble' principle is one that is compatible with any reasonable hypothesis about possibility and coincidence — about "how neutral properties are distributed through modal space". Humility might be attractive for all sorts of reasons, not least that it seems like a pretty safe guarantee that our principle won't struggle with problem cases (like *Whimsy*). I proposed a framework for checking humility: given a "ground model" (basically, inhabited worlds) and a recipe for expanding a ground model to what I called a "global expansion", we could show that:

Theorem. Every global expansion of a ground model is a model of Global Plenitude.

The thought was that, because ground models were designed to settle the facts about neutral properties, *if* any ground model whatsoever could be extended to a model of Global Plenitude, then we'd have some guarantee of humility.[13] Theorem is *true*. But as we'll see shortly, Global Plenitude isn't humble. It isn't even problem-proof.

The problem is that the property reflected by Theorem falls short of humility. It doesn't show that Global Plenitude is consistent with every hypothesis about neutral properties, because it bakes in a *very* significant hypothesis about neutral properties. Very briefly: ground models contain base individuals with properties. When we 'expand' the models, new objects get added into coincidence classes characterized by these base individuals, and so properties from the ground model become *neutral* properties in the expanded model. Consider a base individual *o* in the ground model. For any such individual, the property that is necessarily had by o and nothing else will get expanded to a neutral property. That neutral property, roughly, is the property *coinciding with o*. Crucially in the model, *that* property is had essentially if at all. So the construction bakes in the extremely contentious assumption that for anything at all, there's some 'base individual' with which it essentially coincides. (Notice that Essence Closure plays a particularly

[13] See Fairchild (2019: 163-166) for an overview, and (170-177) for the proof of Theorem.

important role here.) The construction thus provides a perfectly fine consistency proof, and an excellent model of the kind of view I'll discuss in Section 2.3, but hardly speaks at all to humility.

2.2 Problems for Global Plenitude

Sometimes things only accidentally coincide with each other. The statue and the clay coincide, but could have both existed without coinciding — perhaps the artist could have used additional portions of clay to make the statue slightly bigger than it actually is. Slow replacement and reconstruction cases also appear to involve contingent coincidence, at least given the usual plenitudinous diagnosis. Consider Ship of Theseus-style cases: you (thriving) begin to slowly replace the Economy Planks in your ship with Elite Planks, and I meanwhile upgrade my (barely adequate) ship with your discarded Economy Planks. Many of the most pressing questions about identity and survival that are raised by this kind of case (eg. "which is the original ship?") are diffused once we start thinking plenitudinously. At the beginning of the process, there were at least two things where your ship is. At the end of the process, both have survived: you're standing on one of them now, and I'm standing on the other.

Unfortunately, Global Plenitude doesn't allow any of this. The following argument appears in Dorr, Hawthorne and Yli-Vakkuri (2021: 266-267), though I'm especially grateful to Jeff Russell for early discussion of a closely related problem. Here and throughout, I'll occasionally refer to a property that picks out exactly one world — that is, a property that would be had by everything if that world were actual, and had by nothing otherwise. Where w_0 is a world, *W0* will name the property *being such that w_0 obtains*.

> Suppose that *a* and *b* coincide at w_0, but fail to coincide at some other world w_1. Let *H* be the following property:
>
> > H: *coinciding with a or (coinciding with b and W1)*
>
> Consider the following profile based on *a* at w_0:
>
> > *E*: all neutral properties entailed by *H*
> > *A*: all other neutral properties of *a* at w_0
>
> This profile satisfies both Nonlocal and Essence Closure at w_0.[14] So, Global Plenitude tells us that there's some *x* that has every property in *A* accidentally at w_0. But among the properties in *A* are:
>
> > F: *not (coinciding with a and W1)*
> > G: *not (coinciding with b and W1)*

[14] To convince ourselves that <*E,A*> is nonlocally closed, suppose that *G* is a neutral property of *a* at w_0 and some subset of *E* nonlocally entails *G*. Then, by the construction of *E*, *being H and not W0* entails *G*. But since *G* is a neutral property of a at w_0, we know also that *coinciding with a and W0* entails G. So, *being H and W0* entails *G*. So, *H* entails *G*, and so *G* is in *E*. To convince ourselves that <*E,A*> is essence closed: suppose that *F* is a neutral property of *a* at w_0 and that *F* entails *being essentially F.* Since *a* coincides with *b*, both *a* and *b* are *F* and thus essentially F. Since *F* is neutral, necessarily anything that coincides with *a* or coincides with *b* is therefore F. Necessarily, everything *H* either coincides with *a* or *b*. Hence, necessarily every *H* thing is *F*, so *F* is in *E.* (Thanks to Cian Dorr for this argument.)

> Each should therefore be a property that x possibly lacks. So, x coincides with a at w_1 and coincides with b at w_1. But, since coincidence is symmetric and transitive, this contradicts the starting assumption: that a and b fail to coincide at w_1.

So, given Global Plenitude:

> **Necessary Coincidence.** Necessarily, if x and y coincide, then necessarily if x and y both exist they coincide.

There's a more general lesson here, too. Global Plenitude is going to run in to trouble *whenever* there is a profile $<E, A>$ that is non locally closed at w_0, but where there are subsets of F and G in A such that (i) it is otherworldly possible (say, at w_1) for something to be E and F and not G and for something to be E and G and not F, but (ii) there's only one such world. At every world other than w_0 and w_1, if anything is E it is both F and G. In other words, Global Plenitude runs in to trouble when we have collections of properties where it is (otherworldly) possible for something to lack *each* of them, but which are such that there *still* can't be something that has all of them accidentally.

The argument above shows that if coincidence is contingent we can construct a profile that suffers from *exactly* this problem. As long as we want to allow that coincidence might be contingent, we'll need a new notion of 'goodness' for modal profiles — Global Plenitude won't cut it. In Section 3, I'll propose an alternative (Better Plenitude) which generalizes the strategy that underwrote Global Plenitude. But notice also that what we've learned isn't that Global Plenitude is completely broken; it just isn't *humble.* It makes a substantive (and, I think, implausible) demand on what is possible. This raises another question: *is it still plenitudinous?* Is there any sense in which Global Plenitude — requiring, as it does, Necessary Coincidence — lives up to the ambition of maxing out modal variation between coincidents?

The next section takes up this latter question by exploring a plenitudinous picture against the backdrop of Necessary Coincidence. This is a *bit* of an indulgence (expect no less from the plenitude-lover!) since it isn't a view that I am especially tempted to endorse. But I do think that it can be instructive in much the same way that our discussion of the plenitudinous two-thinger was instructive. I'll suggest that we *do* get a recognizable kind of plenitude, even alongside a commitment that seems about as anti-plenitudinous as they come.

2.3 Necessary Coincidence

There's another trope in the period dramas: after the scandal, an unlikely pair turns out not to be such a bad match after all.

Necessary Coincidence disallows cases where two things coincide but possibly both exist while failing to coincide. What it *doesn't* disallow are coincident things that might "outlive" each other; eg. something that essentially coincides with the statue but has various of the statue's accidental properties essentially, and so wouldn't survive in some of the circumstances where there would nonetheless be the statue. These are familiar from the examples sometimes used to motivate pluralism and plenitude:

> "[Aristotle's] kooky objects are items such as sitting-Socrates and musical-Corsicus — items that share the essential properties of Socrates and Corsicus, except that they are also respectively

> essentially sitting and essentially musical. When Socrates is seated, why does this further entity sitting-Socrates not come in to existence — only to be destroyed when Socrates stands? Of course common sense doesn't recognize such entities, but common sense need not be a good guide to the whole extent of ontology." (Leslie 2011: 278)[15]

The picture I'll explore in this section capitalizes on the observation that Necessary Coincidence still allows for an abundance of what Yablo (1987: 302) calls "refinements". Amending the characterization slightly for our terms:

> *x* refines *y* iff *y'*s essential neutral properties are a subset of *x'*s essential neutral properties.

We can fill out a putatively plenitudinous picture in terms of refinements and their "hosts". Setting aside for the moment *what* hosts are, here's the main idea: on this picture, everything is either a host or a refinement of a host. Since (like everything) hosts essentially coincide with themselves, anything that refines a host will also essentially coincide with it. In this way, hosts set the outer limits for coincidence: they're more modally resilient than any of their refinements, and none of their refinements can exist without them. We're ensured Necessary Coincidence as long as hosts necessarily obey:

> **Host Coincidence.** For any hosts x and y, if x and y coincide, then necessarily, if x and y both exist they coincide.

To this, we add the plenitudinous idea that the world is 'full up' on refinements.

> **Host Plenitude.** Necessarily, for any host *x* and property *F,* there exists a refinement *y* of *x* such that necessarily, *y* is coincident with *x* iff *x* has *F*.

Host Plenitude, obviously, isn't formulated according to our template for essentialist principles. (It is much more in the style of Dorr, Hawthorne and Yli-Vakkuri (2021:267-274), and is modeled explicitly on Yablo (1987)'s definitions of *upwards* and *downwards closure.*) But given this background picture, we can recover a version of essentialist plenitude that I argued against in Fairchild (2019). Unlike Global Plenitude, **Merely Modal Plenitude** includes only the basic closure condition:

> **Merely Modal Plenitude.** Necessarily, for any object o and any modal profile M based on o such that M satisfies Closure and Essence Closure, there is something coincident with o that has M.[16]

Notice that for any host *x,* the property *coinciding with x* is had essentially if at all. So, by Essence Closure, *coinciding with x* is in E for every allowable profile. Roughly, then, for any *o* that coincides with *x*, each appropriately closed profile based on *o* will correspond to a refinement of *x.*[17]

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[15] A lot of what I will say in this section has a broadly Aristotelian flavor, and perhaps could be developed further as the scaffolding for a hylomorphic picture. See Cohen (2008) for a recent discussion of Aristotle's 'kooky objects', as well as related discussion in Rea (1998). In the same spirit, Inman (2014) defends a version of plenitude modeled on an Aristotelian treatment of accidental unities.

[16] See Fairchild (2019: 157-159)

[17] Briefly: Take any *F* such that *x* is *F,* and then consider the profile where E contains every property necessarily entailed by *coinciding with x when x is F*. Notice that if *G* is in A, then *x* is *G*, and possibly *x* is *F* and not *G.* So, every *G* in *A* is already guaranteed to satisfy the 'otherworldly' requirement that motivated nonlocal closure.

Although at first **Necessary Coincidence** looked transparently un-plenitudinous, Host Plenitude and the accompanying metaphysics don't seem to me *that* far from the spirit of plenitude. As advertised, coincident things differ as widely as possible. Every region is *chocka*. What's more, because we've remained silent about how to understand coincidence, we have a *very* free hand with how to think of hosts. As long as coincidence is stronger than co-location, we could re-describe the Ship of Theseus-style case above as one that doesn't involve contingent coincidence at all. We say instead that *two* hosts were co-located before the upgrades begin, and after the upgrades, you and I are each standing on hosts that were *never* coincident. Host Plenitude is compatible with pictures where the world is massively overpopulated with hosts, but also with much sparser pictures where there are very few hosts (and so most everything is a more or less demanding refinement). In every picture, though, the core plenitudinous idea is preserved.

My own suspicion is that residual dissatisfaction with the Host Plenitude resembles Bennett's dissatisfaction with plenitudinous two-thingerism:

> "The problem is that the principle adopted by the two-thinger still leaves us with an unanswered question — why exactly are so few modal profiles metaphysically possible? (...) There may no longer be an interesting question about which of the possible modal profiles are instantiated, but there is surely still an interesting question about *which the possible modal profiles are*. Note that the plenitudinous bazillion-thinger does not really face this question, he thinks that all of the consistent ones are possible." (Bennett 2004: 357)

With both plenitudinous two-thingerism and Host Plenitude, we *can* fill out a picture that gives an answer to Bennett's second question: *why are so few modal profiles possible?* Host Plenitude happens to be more recognizably plenitude-*ish* at the end of the day, but the plenitudinous two-thinger can help herself to a similarly substantive background metaphysics to fill out her own story. The thing that feels *off* about both pictures, I suspect, is that *the (other) point of plenitude is for the second question never to come up at all.* There's a background temperament associated with plenitude which has something to do with a kind of metaphysical anti-particularism.[18] We expect ontology to obey general principles; principles we can arrive at without going too far out on an epistemic ledge. It is hard to see how Host Plenitude could be made palatable to someone with that temperament, and even harder with plenitudinous two-thingerism. Plenitude layered on top of an otherwise conservative metaphysics — of modal profiles, or of hosts — seems to miss the point. Thankfully, we can do a little better.

3 Better Plenitude

Better Plenitude eschews sophisticated closure conditions on E in favor of a new condition on A.

> **Better Plenitude.** Necessarily, given any object o and any *good* modal profile M based on o, there is something coincident with o which has M.

Where a profile *M* is good iff *M* is a partition of *o*'s neutral properties into *<E,A>* such that

(Relatedly, this suggests that the construction in Fairchild (2019) can be adapted to show that every ground model can be extended to a model of Merely Modal Plenitude.)

[18] See Fairchild and Hawthorne (2018) and Fairchild (2020).

(1) E is closed under necessary entailment (ie. **Closure)**
(2) A is **disjointly free** at *w*

I'll give the official definition of disjoint freedom shortly, but we can get the idea in hand informally first.

We want to ensure that for whatever properties a profile says are had accidentally, there is some world where something lacks those properties. The problems we explored in Section 2 involved collections of properties that could *each* be had accidentally, but which were such that nothing could have *all* of those properties accidentally. Those cases arise whenever we have some accidental properties *A'* and *A"* such that there is only one world where something lacks *A'* and where something lacks *A"*, but where nothing lacks both. Ultimately, we somehow need to guarantee that good profiles never force us to 'double-count' worlds — there's enough variety in modal space to ensure that all of the properties in A can be lacked by something with every property in E. Very roughly, if a collection of properties is 'disjointly free', then there's some way of dividing it up into subsets where each subset of properties is lacked by something at a different world. To turn this idea into a condition on modal profiles, we'll need to refine it slightly:

A is **disjointly free** at *w* iff there exists a set *P* of partitions of *o*'s neutral properties into $<E',A'>$ such that

(i) each *E'* contains *E*
(ii) the union of *A', A'', A''*... is *A*
(iii) there's an injection $i: P \rightarrow W\setminus\{w\}$ which sends every $<E',A'>$ to a world containing an object that has every property in *E'* and lacks every property in *A'*.

The last condition is a mouthful: it says that there's a way of assigning every partition in the set to a unique world *other than w* , where something in that world has every property in *E'* (and thus, notice, every property in E) and lacks every property in *A'*. Together, these three conditions guarantee that possibility is varied enough to realize the modal profile in question. The first condition ensures that the essential properties are preserved, the second that all of the accidental properties are accounted for, and the third ensures that we never have to `double-count'.

Although it might look a little forced, notice that this is a very natural generalization of the idea that drove us to **Nonlocal Closure** in the first place. We saw that accidental properties make demands on modal space; to have an accidental property requires the cooperation of distant worlds. Disjoint freedom generalizes this idea to accommodate the observation that having *lots* of properties accidentally might require the cooperation of *lots* of modal space.[19]

4 Better Plenitude and Path Plenitude

[19] A second thing to note is that disjoint freedom isn't a completely unfamiliar idea. We sometimes talk about collections of properties being 'free' or 'independent' if (quite roughly) any pattern of instantiation of properties in the collection is possible. Collections of properties that are 'freely recombinable' get pride of place in some pictures of metaphysical possibility; see for example Armstrong (1989), Wang (2013: 538) and Wang (2016), Russell and Hawthorne (2018). Although neutral properties (and accidental neutral properties) clearly aren't *free* in any of the standard senses, it shouldn't be terribly surprising that aiming at a minimal consistency constraint on modal profiles leads to something with the flavor of an independence condition. (Leslie (2011: 278-279), for example, illustrates plenitude by provisionally assuming "strong independence".)

Of course, we need *some* assurance that Better Plenitude won't subject us to scandal in the same way that Global Plenitude did. To that end, this section argues that Better Plenitude is true *iff* Path Plenitude is. Recall, Path Plenitude is:

> **Path Plenitude.** For every function f from worlds to individuals in those worlds, there's an object whose coincidence path is described by f.

Where, again, f describes o's coincidence path iff o coincides with $f(w)$ wherever f is defined, and doesn't exist otherwise. I'll call these functions from worlds to individuals 'paths' or 'path functions'.

An equivalence with Path Plenitude will secure a number of important reassurances for those of us tempted by Better Plenitude. Since illuminating models of Path Plenitude are extraordinarily easy to come by, it will serve first and foremost as an assurance that Better Plenitude is consistent. But perhaps more importantly, it makes it much easier to see what picture of the world Better Plenitude commits us to — what *kind* of plenitude we're in for. After working through the equivalence, I'll return to some of these upshots in Section 5. Since there will be a few conditions to keep track of, here first is an informal picture of how the argument will go.

If Path then Better. We want to show that given something for every path, we have something for every good profile. So, for every o, w, we'll first associate every good profile M based on o at w with a path function such that $f(w) = o$. Once we have a general recipe for associating every good profile M with some path function f, we'll show that *if* there is some u described by f, then u coincides with o and has M at w. And given Path Plenitude, every path describes something. So, given Path Plenitude, for every good profile M, there will be something with M.

If Better then Path. We want to show that given something for every good profile, we have something for every path. We show that for every path function f such that $f(w) = o$, we can construct a good profile M based on o at w, such that if anything has M, it has a coincidence path described by f. This is the trickiest bit, but having shown it, the conclusion follows as before. Given Better Plenitude, every such M is had by something. So, given Better Plenitude, for every path function f, there's something with a coincidence path described by f.

Very trusting readers might skip to Section 5.

4.1 If Path then Better

We first want to show that

> For any world w and o in w , we can associate every good profile M based on o at w with a path function f such that $f(w) = o$, such that if something has a coincidence path described by f, it has M at w.

Let $M = \langle E,A \rangle$ be a good profile based on o at w. Since M is good, we know that A is disjointly free at w. That is, we know that there's a function i that assigns partitions $\langle E', A' \rangle$ to worlds containing objects that have every property in E' and lack every property in A'.

Since we're working towards a function that picks out *objects* rather than worlds, we can define a new function g that chooses the object witnesses for i at each of those worlds. More carefully: when $i(\langle E',A'\rangle)=w^*$, $g(w^*) = y$ such that y is in w^* and has every property in E' and lacks every property in A' at w.[20] (And is undefined iff i is undefined.) So, we define our path function as:

$f(w) = o$
$f(w^*) = g(w^*)$ otherwise

This is a general recipe for associating any good profile with a path.

Now, assume Path Plenitude. We're going to show that given something for every path, we'll have something for every good profile. Let $M = \langle E,A \rangle$ be some good profile based on some o in w. Using the recipe, we can associate M with a function f such that $f(w) = o$. Given path plenitude, f describes the coincidence path of some u that is coincident with o at w. Now we need to convince ourselves that u has M – that is, that u has every property in E essentially and every property in A accidentally.

Note first that because u coincides with o at w, u has every property in E and in A at w. To show that u has every property in E essentially, we need to show that u has every property in E at every other world where it exists — that is, at every world where f is defined. By construction, $f(w^*) = g(w^*)$ at every world other than w. So, if u exists at w^*, u coincides with $g(w^*)$. But also by construction, every $g(w^*)$ has every property in E at w^*, as does anything coincident with it — namely, u. So, if u exists, u has every property in E. To show that u has every property in A accidentally, we need to show that for any property F in A, possibly u exists and isn't F. By disjoint freedom, there's some partition <E', A'> such that F is in A' and there's some world w^* where something lacks every property in A'. By construction, g(w*) is such an object. And again, because F is neutral and u coincides with $g(w^*)$ at w^*, u exists and isn't F at w^*.

So, u has M at w. Thus for any good M based on o at w, we've shown that given Path Plenitude, there's something coincident with o at w which has M. This is just Better Plenitude.

4.2 If Better then Path

We first want to show that

> For any path function f such that $f(w) = o$, we can construct a good profile M based on o at w such that if anything has M, it has a coincidence path described by f.

This time, we need a recipe for associating each path function with a good profile. Given a path function f such that $f(w)=o$, we define a special property F:

[20] For some $i(\langle E',A'\rangle) = w^*$, could there be non-coinciding y and z in w^* such that both have every property in E' and lack every property in A'? If so, there wouldn't be a unique object witness to chose at w^*, and so our recipe for M wouldn't determine a path. But o's neutral properties at w include *not (w^* and coincident with y)* as well as *not (w^* and coincident with z)*. At w^*, y lacks the former property and has the later, whereas z has the former property and lacks the latter, so they won't be eligible to witness the same partition of o's neutral properties.

> F: *(coinciding with f(w) and W) or (coinciding with* $f(w_1)$ *and W1) or (coinciding with* $f(w_2)$ *and W1)….*

for every *w* where *f* is defined. Since *f(w) = o, F* is a neutral property of *o* at *w*. For notational convenience, we'll call the set of *o*'s neutral properties *N*. Let *M* be a profile based on *o* at *w* defined as follows:

> *E*: every property in *N* necessarily entailed by *F*
> *A*: *N - E*

The first thing to show is that *M* is good. *E* is clearly closed under necessary entailment, so really we just need to show that A is disjointly free. There are few conditions to work through, but throughout the remainder of the argument we'll capitalize on the fact that *f* is a well-behaved path function (eg. *f* picks out at most one individual at each world where it is defined) to show that A is similarly well-behaved.

Consider the following set P of partitions of N. For each world w* distinct from w such that f(w*) is defined, we include <E',A'> such that:

> *E'*: *N - A'*
> *A'*: every property in *N* lacked by *f(w*)* at *w**

Notice that *E'* is just the set of *all* of the properties from *N* that *f(w*)* has at *w**, and so this will include every property in *E*. By the construction of *E*, *E* contains all and only the properties entailed by *F*. Because *F* is a neutral property of *f(w*)* at *w**, we know that *f(w*)* has every property entailed by *F* — and thus, in turn, has every property in *E*.

The second condition of disjoint freedom requires that the union of all of the *A'* s is *A*. First, notice that if G is in A, then G is not entailed by F. So, there's some *z, w** such that z that is *F* and not *G* at *w**. Given how we've defined the special property *F*, if *z* is *F* at *w**, then *z* coincides with *f(w*)* at *w**. So, by the construction of P, there's some *<E',A'>* in *P* such that *G* is in *A'*. The other direction is easier: if a property *G* is in *A'* for some *<E', A'>* in *P*, then there's some *w** and *f(w*)* such that *f(w*)* lacks *G* at *w**. Again by the definition of the property *F, f(w*)* has *F* at *w**, and so *f(w*)* has *F* and lacks *G* at *w**. Thus, *F* doesn't entail *G*, and so *G* is in *A*.

Finally, we need to establish that there's an injection *i* that sends every *<E',A'>* to a world (distinct from w) containing something that has every property in *E'* and lacks every property in *A'*. But by our construction, every *<E',A'>* is already associated with a unique world *w** which is distinct from *w,* and moreover contains something that has every property in *E'* and lacks every property in *A'* — namely, *f(w*)*.[21] So, *M* is good.

Thus, we have a recipe for associating any path function *f* with a good profile.

[21] Notice that we'll never wind up with the same partition associated with two distinct worlds. For any w_1 where *f* is defined, $f(w_1)$ lacks the property *being such that ~W1,* but for any other $f(w_2)$ where *f* is defined, $f(w_2)$ has that property. So, the partition <E',A'> for w_1 and <E'',A''> for w_2 won't be the same. Thanks to Cian Dorr and Wade Hann-Caruthers for related discussion.

We now want to show that if something coincident with *o* at *w* has *M*, it has a coincidence path described by *f.* Given Better Plenitude, there is some *u* coincident with *o* at *w* which has *M*. Let *g* be a function describing *u*'s coincidence path. Once again, notice that there's a special neutral property of both *o* and *u* at *w*:

> G: *(coinciding with g(w) and W) or (coinciding with g(w_1) and W1) or (coinciding with g(w_2) and W1)….*

Because *g* describes *u*'s coincidence path, *u* has *G* essentially. Since *u* has *M*, *u* also has *F* essentially. So, for all *w** if u exists at *w**, then *u* coincides with *f(w*)* and *g(w*).* So at every world *w** where *u* exists, *f* describes *u*'s coincidence path. We only need to check that *f* doesn't 'overstep' *u*'s coincidence path; in other words, that there aren't worlds where *f* is defined but *g* is not. But since *u* has *G* essentially, *G* is in E, and so by the construction of *M*, *F* entails *G*. So, in particular, if *f* is defined at a world, *g* is. So: *u* has a coincidence path described by *f.*

We've shown that for any path *f* such that *f(w) =o*, we can construct a good modal profile M based on *o* at *w* such that if anything has *M* at *w*, it has a coincidence path described by *f* . Thus for any path *f*, we've shown that given Better Plenitude, there's something with a coincidence path described by *f.* This is just Path Plenitude.

5 Better Plenitude, Humility, and Essence Closure

The equivalence between Better Plenitude and Path Plenitude can do a lot for us. For one thing, it provides a means of filling out the path approach with a much fuller account of essentialist modal profiles, and so of connecting path-pictures to some of the thornier questions about essence and accident. But perhaps even more importantly, the equivalence provides a *really* clear picture of what the world looks like given Better Plenitude.

This makes it much easier to identify further connections. So, for example, consider something like the formulation of plenitude given in Yablo (1987, forthcoming). Where a *categorical condition in w* is "the combined categorical properties there of some *y* existing in *w*", we can think of modal profiles instead as functions from worlds to categorical conditions in those worlds. (I'm calling this "Yablo*ish*" plenitude because my 'path' style formulation and reference to 'categorical careers' is unofficial, and I have omitted his assumption that each modal profile is *uniquely* instantiated.)

> **Yablo*ish* Plenitude.** For every function *f* from worlds to categorical conditions in those worlds, there's something whose categorical career is described by *f.*

A function *f* describes *o*'s categorical career iff *o* exists in all and only the worlds where *f* is defined, and *f(w)* exactly characterizes all of *o*'s categorical properties there. Yablo describes the categorical properties as those that are had by *x* "independently of what may be going on with *x* in other worlds". If the categorical properties are just the neutral properties, then the picture of the world given by Better Plenitude is *also* described by Yabloish Plenitude.[22]

[22] We also have a bridge to plenitude principles with the structure of those in Dorr et al(2021). The translation into their terminology isn't immediate, since there are a number of differences between their framework and ours — for

The connection with path plenitude also makes a crucial choicepoint especially vivid. Unlike its predecessors, Better Plenitude drops the **Essence Closure** condition. Again, that is:

Essence Closure. If F entails being *essentially* F, F is in E.

As I noted in Section 1, the minimal closure condition in Better Plenitude already guarantees that if a neutral property is necessarily had by everything, then it is had essentially according to every good profile. But consider pictures where there are neutral properties that aren't necessarily had by everything, but which are had essentially if at all. For example:

Location. Necessarily, if something is located, it is essentially located.

Suppose (contentiously!) that it is possible that not everything has a location. Then *being located* isn't a necessarily universal property. But if being located is nonetheless a neutral property, then Better Plenitude is inconsistent with **Location**: there will be things that have locations, but only accidentally so.

This is a kind of failure of humility, in that Better Plenitude rules out an otherwise consistent hypothesis about neutral properties.[23] And Location isn't at all a special case here! Let's say that F is a "nontrivial essence" if F is a non-universal neutral property that possibly something lacks, but which is had essentially if at all. So: Better Plenitude is incompatible with *any* nontrivial essences. Put another way, Better Plenitude gives us Accident:

Accident. If F is a neutral property such that possibly something is F and possibly something is not F, then possibly something is accidentally F.[24]

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example, they allow for objects that exist but don't coincide with themselves. But the following is broadly in the spirit of their approach:

BoPish Plenitude. Every neutral unrepeatable property describes something.

Where a property F is *unrepeatable* iff necessarily, if x and y are both F, x coincides with y. Taking our cue from before, a property F 'describes' x when x coincides with anything F if there is any F, and doesn't exist otherwise. If we restrict attention to properties that are possibly instantiated, I believe that BoPish Plenitude is equivalent to Path Plenitude. (See especially the discussion of Coincidence Plenitude in Dorr et al (2021: 271-272).

[23] Namely: *being located* is a neutral property, and possibly some things coincide with themselves and are not located. Notice that someone committed to understanding 'coincidence' as *spatiotemporal* coincidence will either say that in fact everything *does* have a location (and so *being located* is a universal property after all) or will deny that everything coincides with something. Denying the latter is especially costly in the present context.

[24] The difficult case here, as usual, will be properties like 'shaped' like *H:*

H: *being such that either ~w1 or (w1 and G)*

Where G is a neutral property that some things at w have and some things at $w1$ lack. As usual, any of the Gs at $w1$ must have H essentially, and of course everything else at $w1$ doesn't have G at all. But *if* I'm right that Better Plenitude is equivalent to Path Plenitude, then we know that there is something in some *other* world $w2$ which is H at $w2$ and takes a "path" through one of the non-Gs at $w1$. That is: something at $w2$ which is accidentally H. Importantly, **Actual Accident** doesn't follow from Better Plenitude:

Actual Accident. If F is a neutral property such that possibly something is F and possibly something is not F, then something is accidentally F.

(The equivalence with Path Plenitude makes this especially easy to see, at least if we allow ourselves to indulge in some picture-thinking. Think of neutral properties as describing regions of modal space. An object with a coincidence path that 'passes through' a property region in some world has that property accidentally there. An object with a coincidence path that always stays inside of a property region has that property essentially. Nontrivial essences are property regions with enforced borders: contra Path Plenitude, *nothing* has a path that merely passes through them.)

The addition of Essence Closure to Better Plenitude would give us a plenitude principle that doesn't entail **Accident**, and is compatible with nontrivial essences. The resulting principle opens up a theoretical space that is otherwise difficult for a plenitude-lover to occupy. She can take seriously hypotheses like **Location**, but also *much* more controversial packages of commitments: for example, that *having moral worth* is a neutral property, and that anything with moral worth has it essentially.[25] Better Plenitude with Essence Closure is, in this sense, more humble than Better Plenitude alone. It comes much closer to saying *nothing more or less* than that coincident things "differ as widely as possible" in their modal properties.

But here the lesson of Section 2.3 looms, I think: this kind of humility comes at a *really* significant trade off of another value central to plenitude. Essence Closure raises a question that I haven't the foggiest idea how to answer: which (nontrivial, neutral) properties are had essentially if at all? As I've already suggested, part of the attraction of plenitude is the promise that answers to difficult questions about essence and accident might follow *merely* from limitative constraints on ontology. Making room for substantive essences would earn us humility, but in so doing we would surrender a different kind of metaphysical modesty.

5 Concluding Remarks

When the dust settles on a scandal (in the dramas, remember) usually a big decision follows close behind: someone has established a new line of inheritance, someone is heading off to France, or there's a proposal on the horizon. I'm afraid that here I'll depart from the tropes, because I remain deeply ambivalent about this final choicepoint. We're left with a much larger question about the aims of plenitude: do we *just* want to 'max out' variation between coincidents, or do we want the kind of decisive abundance promised by Path Plenitude? The choice, as I currently see it, is between an approach to ontology where we aim for principles that are humble about how the rest of the metaphysics might turn out — leaving space for more substantive constraints on what there is — and an approach to ontology that instead enshrines a different kind of modesty about metaphysics. On the latter approach, we're not wholly *humble* when it comes to hypotheses that would themselves overstep our metaphysical sensibilities. I'm still not sure which virtue to chase. Nonetheless, we've still made some incremental progress. I've tried to offer a diagnosis that unifies some puzzling challenges for Global Plenitude — among them, worries about *Whimsy*-like cases and worries about contingent coincidence. I've also argued that the essentialist approach can do *much* better than Global Plenitude, and that the resulting view can be fruitfully connected to other work on plenitude. The result is, I hope, a somewhat better sense of the character of plenitude — feathers and all.

[25] This package of commitments is connected to the sprawling debate about 'personites'; short-lived entities that essentially coincide with persons. See for example Johnston (2016a, 2016b) and Olson (2010).

Bibliography

Armstrong, David Malet (1989). *A Combinatorial Theory of Possibility*. Cambridge and New York: Cambridge University Press.

Baker, Lynne Rudder (2008). A metaphysics of ordinary things and why we need it. *Philosophy* 83 (1):5-24.

Bennett, Karen (2004). Spatio-temporal coincidence and the grounding problem. *Philosophical Studies* 118 (3):339-371.

Cohen, S. Marc (2008). Kooky objects revisited: Aristotle's ontology. *Metaphilosophy* 39 (1):3–19.

Dorr, Cian ; Hawthorne, John & Yli-Vakkuri, Juhani (2021). *The Bounds of Possibility: Puzzles of Modal Variation*. Oxford: Oxford University Press.

Fairchild, Maegan (forthcoming). Arbitrariness and the long road to permissivism. *Noûs*.

Fairchild, Maegan (2020). Varieties of plenitude. *Philosophy Compass* 15 (3):1–11.

Fairchild, Maegan (2019). The Barest Flutter of the Smallest Leaf: Understanding Material Plenitude. *Philosophical Review* 128 (2):143-178.

Fairchild, Maegan & Hawthorne, John (2018). Against Conservatism in Metaphysics. *Royal Institute of Philosophy Supplement* 82:45-75.

Fine, Kit (1999). Things and Their Parts. *Midwest Studies in Philosophy* 23 (1):61-74.

Fine, Kit (1994). Essence and modality. *Philosophical Perspectives* 8 (Logic and Language):1-16.

Fine, K. (1982). Acts, events, and things. Language and Ontology, *Proceedings of the Sixth International Wittgenstein Symposium,* Wien: Hölder-Pichler-Tempsky, 97– 105.

Gibbard, Allan (1975). Contingent Identity. *Journal of Philosophical Logic* 4 (2):187-222.

Hawthorne, John (2006). *Metaphysical Essays.* Oxford University Press.

Inman, Ross (2014). Neo-Aristotelian Plenitude. *Philosophical Studies* 168 (3):583-597.

Jago, Mark (2016). Essence and the Grounding Problem. In *Reality Making*. Oxford: Oxford University Press. pp. 99-120.

Johnston, Mark (2016a). Personites, Maximality And Ontological Trash. *Philosophical Perspectives* 30 (1):198-228.

Johnston, Mark (2016b). The Personite Problem: Should Practical Reason Be Tabled? *Noûs* 50 (4):617-644.

Leslie, Sarah-Jane (2011). Essence, Plenitude, and Paradox. *Philosophical Perspectives* 25 (1):277-296.

Olson, Eric (2010). Ethics and the generous ontology. *Theoretical Medicine and Bioethics* 31 (4):259-270.

Paul, L. A. (2010). The Puzzles of Material Constitution. *Philosophy Compass* 5 (7):579-590.

Rea, Michael C. (1998). Sameness without Identity: An Aristotelian solution to the problem of material constitution. *Ratio* 11 (3):316–328.

Roca-Royes, Sonia (2011). Essential Properties and Individual Essences. *Philosophy Compass* 6 (1):65-77.

Russell, Jeffrey Sanford & Hawthorne, John (2018). Possible Patterns. *Oxford Studies in Metaphysics* 11.

Spencer, Joshua (2020). The limits of neo‐aristotelian plenitude. *Pacific Philosophical Quarterly* 101 (1):74-92.

Wallace, Meg (2019). The Lump Sum: A Theory of Modal Parts. *Philosophical Papers* 48 (3):403-435.

Wallace, Meg (2014). The Argument from Vagueness for Modal Parts. *Dialectica* 68 (3):355-373.

Wang, Jennifer (2016). Fundamentality And Modal Freedom. *Philosophical Perspectives* 30 (1):397-418.

Wang, Jennifer (2013). From Combinatorialism to Primitivism. *Australasian Journal of Philosophy* 91 (3):535-554.

Yablo, Stephen (1987). Identity, Essence, and Indiscernibility. *Journal of Philosophy* 84 (6):293.

Yablo, Stephen (forthcoming). Everything Exists: Plenitude, Kinds, and Paradox. In *The Question of Ontology*, ed. Javier Cumpa. Oxford University Press.

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