Could the World be Flat?

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I begin my day by drinking coffee from my favorite coffee cup, followed by teaching a class of students at the university where I work. Just as my day involves many interactions of tiny bits of matter (my coffee sloshing against my coffee cup, the chalk in my hand scraping against the chalkboard), it also involves many interactions of medium and larger-sized entities (my metaphysics lecture being processed by a class of students, their notes being hammered away on their laptops.) Some of the entities, like the chalk particles, are merely physical, whereas other entities, like the class of students, are socially constructed. Many of the more complex entities (the chalkboard, the class) are made up of the less complex entities (the particles, the students.)

Or so we think. Mark Fiocco has written a striking book full of bold claims arguing against a particular way of doing metaphysics, and by extension, this layered way of viewing the world. In this commentary, I will focus on two aspects of Fiocco's project. The first aspect is the argument against any metaphysical priority, and the second aspect is the explanatory power of a metaphysical view that does not include ontological priority. My general goal will be to explore the prospects for an ontology that does not admit any relations of priority between entities.

First, some background will be helpful. A commonly accepted metaphysical worldview centers around the idea that there are basic building blocks of reality that construct everything else. These building blocks, the *fundamentalia*, are not ontologically or explanatorily dependent on other things. Generally, the *fundamentalia* are taken to form a minimal complete basis of reality: get these building blocks, and you also get everything else. Everything else-- the derivative things-- are those that inherit their being from the fundamental building blocks of reality. The world is stratified in both kind and degree: it is divided into the fundamental and the derivative, and into the more and less fundamental. A brain is more fundamental than the mind that it realizes; a group of particles is more fundamental than the rock that it makes up; a lump of clay is more fundamental than the statue that it constitutes; a group of people is more fundamental than the soccer team that it composes. Much of contemporary metaphysics has been concerned with the nature of *fundamentalia*, and with the exact nature of the relationship between the more and less fundamental. Recent years have seen a surge in work on the nature grounding, roughly, the relationship between the more and less fundamental.

Fiocco makes several suggestive moves against this layered ontological worldview, and against its underlying methodological assumptions. First, he suggests that "no thing can be *made to be* by something else"; that "*there can be nothing further that determines how a thing in its entirety is*." (p. 77, emphasis in the original); and that "one thing cannot be made to be by something else [...] one thing cannot make another thing be *what* it is." (pp. 78). Each individual thing exists as a sort of explanatory and metaphysical primitive. Moreover, Fiocco holds that "there is no hierarchical structure in reality-- no ontological priority, no levels of being-- and it is misguided to characterize the fundamental in terms of what builds, but is not built. Every thing among *all this* is existentially on par; the world is ontologically 'flat.'" (p. 96)

Fiocco thus denies that the world has a layered structure, because something is never more fundamental than something else. This "flat world-ism" (as Bennett 2011, p. 28 and 2017, p. 123 calls it) holds that everything is ontologically homogenous in terms of existence and hierarchy. Things do not have different degrees of being. Things do not determine, and are not determined by, each other. Particles are on par with corporations; lumps are on par with the statues that they make up; cars are on par with galaxies. What there is encompasses a bunch of stuff spread out in time-- what Fiocco calls "all *this*"-- but without structure or ontological hierarchy that we normally take to back our everyday intuitions about reality. Things are also on par with respect to what we might call "constructive potential." Stuff *cannot* build other stuff, since no determination or ontological dependence relations are possible.

Supporting this view is Fiocco's idea of what he calls "original inquiry," a philosophical method aimed at gaining metaphysical knowledge of the world without making any assumptions about what the world is like. Cartesian in character, original inquiry aspires to "gain insight into the world without prejudice" (p. 88) and to "[attain], without presuming anything about the world, the correct account of a thing." (p. 305) Flat world-ism has a natural connection to this sort of method, since one need not assume, for example, that there even are galaxies or particles in the first place. And though Fiocco does not appeal to theoretical virtues in his arguments, flatworldism also enjoys a kind of ideological parsimony, since it denies a lot of the complicated structure that other views struggle to articulate and defend.

As a metaphysician who defends exotic ontological views, I am in the target audience for serious consideration of flatworldism. In other work[1], I have defended *middleism*, the idea that a middle level of reality could be the most fundamental, and also *ontological pluralism about non-*

[1] See Bernstein (2021a).

being,[2] the view that there are multiple fundamental ways to not exist. In my view, metaphysics is enhanced by working out the details of views that might not have much on the surface to recommend them. Sometimes, views that do not seem plausible on the surface turn out to be formidable rivals to leading theories on the basis of parsimony, explanatory power, continuity with science, or other selected theoretical virtues. Lewis's modal realism[3] is perhaps the most prominent such view, but Schaffer's monism[4] and McDaniel's degrees and ways of being[5] are also instances of the phenomenon. It would be exciting to be able to place flatworldism into this surfacely-implausible-but-surprisingly-compelling category. But I have several worries about the theoretical payoffs of flatworldism, including its ability to match its rivals in explanatory power. I turn now to this topic.

The Explanatory Tasks of Ontology

In order to evaluate Fiocco's view in the context of its rivals, it is helpful to have a grip on the explanatory tasks of ontology. As I see it, the two main explanatory tasks of ontology are (i) providing "entry criteria" for existence and (ii) offering a list of what exists. Friends of fundamentality add another task (iii): identifying relations of priority between things.[6] I will discuss these tasks in turn, and then I will circle back to Fiocco's view.

Imagine a big warehouse of every single thing that there is-- what I like to think of as the "Big Warehouse of Being." The first task of ontology is to tell us why things belong in the Warehouse: why let in cars, for example, but not purple unicorns? Here we can imagine an ontological bouncer, checking each candidate for existence against a list of criteria for being allowed entry. The content of these entry criteria are a classic locus of disagreement. One ontologist might hold that something must be located in spacetime to exist, whereas another might hold that what it is to exist is to be the value of variable bound by a fundamental quantifier.

A second task of ontology is to list all of the things there are in the Warehouse-- that is, to provide a catalog of everything that exists. Here, the central locus of ontological disagreement centers on what is actually in the Warehouse. One ontologist might hold that God is in the

[2] See Bernstein (2021b).
[3] See Lewis (1986) for the most prominent defense of modal realism.
[4] See Schaffer (2009) and (2010) for classic depictions of this view.
[5] See McDaniel (2010), (2013), and (2017) for articulations of these views.
[6] For a similar accounting of the tasks of metaphysics, see Schaffer (2009).

warehouse, whereas another might hold that only physical things are. One ontologist might hold that humans belong in the Warehouse, whereas another ontologist might hold that only their composite bits belong there. Ontologists disagree on the number and types of things in the Warehouse, and they do this partly by disagreeing on how things are carved up. Whereas one ontologist might hold that there are number-chairs in addition to numbers and chairs, others might hold that there are none of these things, properly speaking.

A third task of ontology is to limn relationships of ontological priority or other types of categorical differences, should there be any. This explanatory task arises from apparent differences in the sorts of things we encounter in everyday life. A number seems different than a coffee mug; an insect seems different than a baseball team; a muon seems different than a book. Friends of fundamentality see the world as a hierarchically layered structure ordered by unidirectional relations of priority. Particles make up objects; objects make up cities; humans make up corporations; and so on. Together, grounding and fundamentality are taken to explain the apparent layered nature of reality, while doing justice to the "building" relationships between these things.

The three explanatory tasks intersect in various ways. Criteria for entry bear on whether there will be Eiffel-Tower-Abraham-Lincoln-Pinkies in the Warehouse, corporations in the Warehouse, or just some mereological simples. If one believes that there are no composites (a la Merricks 2001), then only mereological simples will be in the Warehouse. If one believes that any collection of things can compose another thing, then Eiffel-Tower-Abraham-Lincoln-Pinkies will be in the Warehouse. And if one believes that nonfundamental or "built" entities exist, then corporations will be in the Warehouse.

Even if there is agreement on entry criteria, there might be substantive ontological disagreement on what meets the criteria. For example, one might wonder whether absences and omissions meet a spacetime location criterion, or whether an empty set can be the value of variable bound by a fundamental quantifier. One ontologist might take fundamentality to be an entry criterion into existence, whereas another might allow derivative entities past the velvet rope. Others hold that both the fundamental and the derivative exist, but that the distinction helps explain apparent differences in the natures of disparate things, like particles and corporations. Still other ontologists like McDaniel (2013, 2017) hold that being comes in degrees. Something's degree of being decreases the less fundamental it is.

An explanatory ontology gives answers to why things are carved up in the way they are. One might hold that there are x number of existent things because there are x number of

mereological simples, and mereological simples are the only things that exist. Or one might hold that there is just one big thing, because that is the most fundamental thing, and only the most fundamental things exist.

One way into the question of what exists is just to ask what the existent things have in common. We peer into the Warehouse and ask: why *this* exact collection of things? The worry about this extensional method is that a list of what there is in the warehouse does not necessarily come with reasons why things are on the list. It does not give us a way for the bouncer to check who gains entry should there be a question; it's just a way to check what is already inside.

There is a dialectical parallel to be drawn with the metaphysics of laws. Just as some philosophers hold that laws are nothing more than regularities and patterns in a Humean mosaic, some philosophers might hold that all there is to existence is being on the list. There is no further thing to explain or illuminate. That the things on the list are on the list is an explanatory primitive, and to inquire further as to the reason they exist is to try to buy an explanation that isn't on offer. Fiocco is one such case, writing that "A thing itself [...] is beyond explanation--*inexplicable*-- not merely in that it is apt for explanation, yet none is available, but in *not even being susceptible to explanation*." (p. 80)

One way to compare rival ontologies is to examine how well they meet each of these explanatory tasks. I will suggest that Fiocco's variety of flat worldism fares worse than its rivals with respect to several of the central explanatory tasks of ontology. But it is worth noting that Fiocco's methodological view is essentially a denial of the explanatory desiderata that I have articulated. Thus one might hold that I am using the wrong measure of comparison, since Fiocco denies that such explanatory tasks-- the ones I am using as the measuring stick-- can be met in the first place.

To this point I have two responses. First: methodology and theoretical virtues are up for debate, and thus it is appropriate to make claims about them. This is especially the case when the methodology so infuses the first-order metaphysical claims, as in the case of Fiocco's connected method and view. Second: we can agree that metaphysics has *some* explanatory charges without agreeing on how to characterize them. While Fiocco admits that there is a problem with how to compare metaphysical theories (pp. 39-40), he does agree that "The chief objective of metaphysics as a discipline is a comprehensively general account of what the world is (and what it comprises)." (pp. 37) As long as there is a goal, it is plausible that there is a standard for measuring when the goal is met, even if we do not agree on what it is.

Now consider task (i), providing entry criteria into existence. Per Fiocco's method of original inquiry, we are supposed to accept the presentation of "all *this*"-- a homogenous bunch of stuff-- without assuming which individual things exist or what their relationships are to each other. While we are supposed to know that *all this* exists, we don't have an answer as to why it does, akin to answers that other rival ontologies can give.

But Fiocco's conception of original inquiry does not address the possibility that the diversity of entities with which we eventually become acquainted map more accurately onto ontological hierarchies than onto a flat world. On Fiocco's view, we enter the activity of original inquiry and come out the other side with an ontology of natured, non hierarchically-related entities. But it seems at least as likely that the activity of original inquiry will result in exactly the sort of picture the flatworlder rejects-- a world of entities built and explained by others. Any attempt at ontological inquiry will result in views about what entities they are and how they are related.

Fiocco's view fares somewhat better on the second task. While it doesn't necessarily provide a list of what exists, given that the ontology is *all this* and a world of fundamental individuals derived by original inquiry, Fiocco's view does give a sense of what is in the Warehouse. There is a world of natured entities, each of which is fundamental, and none of which grounds any of the others. In theory, we have an account of both the numbers of things and of the types of things. But there are still many unanswered questions about the list of things. For example: why is the list divided up in exactly the way it is? Could there be a different number of things still compatible with the method of original inquiry? Since original inquiry stems from human phenomenology, would different ontologies stem from different beings? Though there are stories to be given, these questions are unanswered on Fiocco's account.

Third: an ontology without fundamentality relations has trouble explaining the plethora of entities that we take for granted. The most obvious examples are entities that many metaphysicians take to be non-fundamental, such as "medium-sized dry goods" like tables and iPads, as well as socially constructed entities like universities and sports teams. For the friend of fundamentality, such entities are ontologically derivative because their existence depends on other things, including collective human attitudes. For Fiocco, however, such entities are all on par with each other. The existence of the particles does not a bear a special building relationship to the existence of the table, and the existence of collective human attitudes does not bear a special building relationship to the university. Flatworldism simply denies that there are

synchronic dependence relationships between things that metaphysicians (and ordinary people) typically take to be builders and buildees.

Now, the flatworlder can accommodate the idea that things can be parts of other things without building those things. For example, the wood pieces eventually become parts of the shelf without building the shelf. A flatworlder can also accept other modal relationships as well, as long as they are not building or fundamentality relationships. But cleaving these apart comes at a high theoretical cost, since one denies that parts in any sense *build* their wholes.

The view also does not account for entities in the social world; at the least, it does not have a natural story to tell about them. Consider a dollar bill. Intuitively, a dollar bill (*qua* currency) would not exist without collective human minds and attitudes. Though the exact structure of the relationship between currency and collective human attitudes is controversial, almost no one would deny that the latter plays a significant role in the very existence of the former.

It is hard to see how Fiocco's view meets the central explanatory tasks of ontology. Even setting aside task (iii), since Fiocco is no friend of priority relations, the view does not meet the first two explanatory tasks better than other rival theories. It doesn't tell us why the things that exist do so. And while it gives us a list of entities that do exist, drawn from the method of original inquiry, it doesn't necessarily give us answers as to why things are carved up in the way that they are-- why there are exactly the number of things that there are and why those things exactly. As I will now suggest, even other exotic ontologies have answers to this question.

Flatworldism versus its Rivals

In order to bring out the strangeness of flat worldism, it might help to take a look at a similar kind of building relationship: diachronic building. Suppose that I purchase an IKEA bookshelf that comes in a flatpack of wooden pieces. I take the pile of wooden pieces and construct the bookshelf out of them. There is some sort of important relationship between the flat pack and the eventual bookshelf: one would not exist without the other. Similarly, there is some sort of important metaphysical relationship between the wooden pieces and the bookshelf after the bookshelf is constructed. We cannot remove the wood pieces without thereby removing the bookshelf, and we cannot tinker with the bookshelf without tinkering with one of its pieces. There is a tight intuitive connection between building relationships and modal relationships that flatworldism denies. Flatworlders can say: while the pieces have something to do with the shelf,

they do not *build* or *ground* the shelf. The shelf is just the shelf, and it is not explained or constructed by its pieces.

In doing this, the flatworlder accepts not just a world full of coincidence, but of seemingly *ex nihilo* appearances of everyday objects. A world full of coincidence and of *ex nihilo* generation is coherent and conceptually possible. But accepting such a world falls short of some of the explanatory goals of ontology.

Since common examples of grounding tend to involve synchronic determination relations, skepticism about grounding sometimes takes the form of skepticism about derivative ontological entities more generally. The thought is that we must be talking about something special and magical over and above the relationship between the wood pieces and the bookcase: why posit an extra explanatory relationship for what already seems manifest? Yet while the nature of grounding has been thoroughly hashed out via formalization and abstract reasoning, many take grounding to be as quotidian as the relationship between an IKEA flatpack and the bookshelf that its pieces eventually make up: a simple and intuitive dependence relation that we utilize in everyday life.[7] Without the wood pieces, there is no bookshelf. Grounding is logical, not magical.

Whether one should accept capital-G Grounding as the relevant dependence relation between the pieces and the shelf is a matter of considerable debate.[8] Kovacs (2023) details several reasons that one might be a Grounding skeptic. One might deny less quotidian views of Ground because accepting such a notion would seem to multiply relations beyond necessity. Or, like Wilson (2014), one might hold that there are many little-g grounding relations (composition, constitution, realization, and the like) that suit our theoretical needs without the umbrella capital-G notion.

But denying that there are any determination relations altogether puts the explanation-seeker in a tough spot. It seems to deny explanatory relationships that almost always hold true, without replacing these explanatory relationships with other ones. Maintaining that we should not explain the weight of the bookshelf by explaining the weight of the wooden pieces comes at a theoretical cost. It is additionally costly to not replace this explanatory relation with another one.

[7] See Trogdon (2013) for extensive discussion of this view.
[8] See Wilson (2014) for a prominent anti-Grounding move in this debate.

At this juncture, it might be helpful to compare and contrast Fiocco's view with some of the exotic rivals that I mentioned above. First, let us compare Fiocco's view to ontological pluralism, the view that there is more than one fundamental way of being. Typical formulations of ontological pluralism posit two ways of being-- for example, *being abstract* and *being concrete*. These ways of being back explanations about very different kinds of existents. As I suggest in other work (Bernstein 2021), one way that ontological pluralism explains differences between types of entities is by connecting essence with its existence. Since a thing must either $\text{exist}_{\text{abstracta}}$ or $\text{exist}_{\text{concreta}}$, which one something exists *as* already goes some way in explaining the sort of thing that it is. If something $\text{exist}_{\text{abstracta}}$, for example, we already have some information about why it cannot be a particular coffee cup. One explanatory advantage of this sort of ontological pluralism is that we have built-in explanations for why things are so different without having to accept priority relations. Many forms of ontological pluralism do not incorporate specific commitments to grounding or other hierarchies of being, beyond the fundamental divisions. This sort of ontology accomplishes a lot of Fiocco's theoretical aims, while having more explanatory power than flatworldism.

Some varieties of ontological pluralism are even compatible with Fiocco's view. On Fiocco's view, objects also share a connection between their existences and their natures (though the idea of essence, traditionally construed as that which makes a thing what it is, is rejected.) According to Fiocco, "[What] a natured entity is is not determined by the ways it is; rather, the ways it is-- how it is essentially-- are determined simply by its being (and, thus, being what it is.)" (pp. 82) One way to understand Fiocco's view is as a particularly plentiful form of ontological pluralism, where each object is not just fundamental, but represents a way of being. Such a view does justice to the explanatory independence of all things that is at the heart of Fiocco's project. It also reaps some explanatory benefits missing from the Fioccoian formulation: we have a good explanation of differences between sorts of things without resorting to the hierarchical structure that Fiocco rejects.

We can also compare Fiocco's particular version of flatworldism to other varieties of flatworldism that do not incorporate all of Fiocco's commitments. As I mentioned above, one flatworldist view maintains that there are no priority relations, but that there are still important explanatory mereological relationships. This kind of flatworldist could hold that the wooden pieces are parts of the bookshelf while denying a relationship of ontological priority between the pieces and the bookshelf. On this view, we still have some sort of explanation of our everyday

intuitions about relationships between parts of bookshelves and the bookshelves they compose, without holding that it is a grounding or determination relation that explains them.

As Bennett (2017: p. 216) points out, ontological nihilism, the view that there are no composites, can also be interpreted as a variety of flatworldism. Ontological nihilism tells us what there is: there are just the mereological simples. It gives a *prima facie* reason why there are the exact number of things that there are: there are no composites because there are just the mereological simples. It gives us entry criteria into the Big Warehouse of Being: something can enter if it's a mereological simple, and it cannot if it is not a mereological simple. While some varieties of ontological nihilism make room for non-fundamental composites with less-than-full degrees of being, many varieties of the view simply deny the existence of higher-level entities, sharing a theoretical commitment with Fiocco's view. Here, too, ontological nihilism seems to meet two out of three explanatory tasks of ontology better than Fiocco's particular variety of flatworldism, which has trouble meeting the first two tasks.

Conclusion

Fiocco has developed an ambitious and provocative ontology. While Fiocco's package of views might find few other takers, such an offering prods ontologists to be clear on the comparative advantages and disadvantages of rival views. Flatworldism is often dismissed as "crazypants" (Bennett 2011: p. 28) because it fails to incorporate the ontological hierarchy that we take for granted. But crazypants views sometimes offer unexpected advantages and theoretical virtues with which it is hard to compete. While I do not think that Fiocco's flatworldism offers these advantages, it provides an opportunity to take a closer look at some views in its vicinity. Views that have enjoyed recent prominence, including ontological pluralism and ontological nihilism, can be interpreted as flat ontology views. Such exotic ontologies press us to justify our theoretical commitments and background assumptions. The world need not be flat in order for us to seek its limits.

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