

Against Fundamentality-Based Metaphysics

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Metaphysical views typically draw some distinction between reality and appearance, endorsing realism about some subject matters and antirealism about others. There are different conceptions of how best to construe antirealist theories. A simple view has it that we are antirealists about a subject matter when we believe that this subject matter fails to obtain. This paper discusses an alternative view, which I will call the fundamentality-based conception of antirealism. We are antirealists in this sense when we think that the relevant matters fail to be constitutive of fundamental reality. The following discussion will not rely on any particular understanding of fundamental reality, covering conceptions based on grounding, naturalness and truthmaking, to name three salient ones. This paper argues that there are serious issues with fundamentality-based metaphysics. It will be argued that: (1) the fundamentality-based approach shapes and restricts our realist and antirealist views in unsatisfying ways, (2) that it is unable to handle the conflicting facts that lie across the envisaged ‘layers’ of the metaphysically structured world, and (3) that there is no good methodological reason to turn to the fundamentality-based approach. The paper will conclude with a diagnosis of the discussed issues, identifying a common source.

1. Introduction: fundamentality-based metaphysics

We all exclude certain matters from our conception of the world. None of us believe that witches fly around on their brooms, that ghosts walk the castle ruins of Scotland, or that spirits roam the forests of Japan. None of these things are the case. Witches, ghosts and forest spirits do not exist.

An exclusion from reality does not always take the form of a denial of the existence of something, however. When a stick is held in an aquarium, so that it appears bent, nobody believes that the stick is bent, even though we believe that the stick exists. It is the stick’s being bent that fails to be real, in the straightforward sense that it fails to obtain.¹

All of us endorse antirealism with regards to these kinds of matters, regarding the existence of witches and the bentness of a stick seen through water. It is a very simple kind of antirealism, on which the relevant matters fail to obtain and the belief that they obtain is false.

¹ Those who accept facts in their ontology can say that even this antirealism involves the denial of the existence of something, namely the denial of the existence of the fact that the stick is bent, besides the more mundane denial of the stick’s being bent.

Since the earliest beginnings of metaphysics, thinkers have offered radical worldviews on which far more is excluded from reality than is commonly thought. It has for example been proposed that reality consists only of one seamless unchanging whole (Parmenides), that reality consists only of atoms bouncing around in the void (Democritus), that reality consists only of Forms (Plato), and so on. All else is deemed mere appearance. And here too, the distinction does not just concern the existence of entities: according to such thinkers as Galileo, Descartes, Boyle and Locke, things have the matter and extension they appear to have, but not the colour, temperature or taste that they manifest in our perceptual experience. Only the instantiations of so-called primary properties are part of the world as they see it, the rest is deemed mere appearance.

It has been argued, notably by Fine (2001: 2) and Schaffer (2009: §2.1), that the metaphysician's far-reaching exclusion of matters from reality is not charitably construed as involving an antirealism of the simple error-theoretic kind. Construed as such, radical metaphysical views face considerations that threaten to trivialize their rejection. Schaffer illustrates this for the case of a simple antirealism about numbers:

Here, without further ado, is a proof of the existence of numbers:

1. There are prime numbers.
2. Therefore there are numbers.

1 is a mathematical truism. It commands *Moorean certainty*, as being more credible than any philosopher's argument to the contrary. Any metaphysician who would deny it has *ipso facto* produced a *reductio* for her premises. And 2 follows immediately, by a standard adjective-drop inference. Thus numbers exist. End of story. (Schaffer 2009: 257).

One might wonder, why even proceed via argument? Why not simply insist directly on the Moorean certainty of the claim that there are numbers? As I understand it, the point is not some difficulty that the simple antirealist view runs into when its opponent resorts to some special 'Moorean' or common-sense approach to epistemology. The point seems to be that there is a basic clash between error-theoretic antirealist views and an uncontroversial role of argumentation in philosophy (cf. Dorr 2010: ¶6). Arguments proceed on the basis of premises. Arguments will be more convincing when they rely on premises that are widely shared and well-supported. But if any claim is well-supported and widely shared, then surely the claim that there are prime numbers is well-supported and widely shared. If even a simple argument like this fails to establish anything, one starts to wonder how anything can be established by the sorts of argumentation that we philosophers engage in.

One might think that a paraphrase strategy could help defuse the argument, so that the premise is in a certain sense true but without exactly meaning what we think it does. But Schaffer and Fine reply that a paraphrase of the undeniable premise will not in general be plausible, nor even relevant to the discussion. As Schaffer puts it:

[O]ne might hold that it is only *according to the fiction of numbers* that there are prime numbers. I reply that this does not touch the argument. 1 does not make any claims about fictions (nor is there any covert fictive operator lurking in the syntax). So presumably this is a way of saying that 1 is false, and only some suitable paraphrase is true. But 1 is obviously true, as stated. Whatever

philosophical concerns might motivate this paraphrasing fictionalist have met their *reductio*. (Schaffer 2009: 257).

A paraphrase allows us to save an utterance of the sentence ‘there are prime numbers’, by assigning it a less committing content than it seems to have, such as a content concerning fictions about numbers. But if it is possible at all to also make some claim directly about numbers (instead of about fictions about numbers), then that is the claim that is clearly intended in Schaffer’s argument for the existence of numbers – indeed, Schaffer explicitly says that it is so intended – leaving little room for any charitable interpretation otherwise. And so any claims about fictions are just beside the point as far as the given argument goes.²

More generally, then, it seems that if metaphysicians offer antirealist views beyond the ordinary ones, and we construe these views as being of the simple error-theoretic kind, then they are open to trivial counterarguments. If one does not already believe one of the radical metaphysical views, one can hardly be argued into one.

Enter a new approach to antirealism. A plausible antirealism, many now think, cannot concern the obtaining of the relevant matters, lest it denies the obvious for non-obvious reasons. A plausible antirealist stance must be denying that the relevant facts enjoy a certain privileged status, instead of simply denying that they obtain. Even though the metaphysician refuses to admit a given fact into her metaphysical conception of the world, this does not mean that she can no longer assert that these things are the case, that there are prime numbers between 1 and 9, for example. To exclude a given matter from one’s metaphysical conception of the world is to deny that the given fact has the relevant privileged status.

There are different conceptions of what the relevant privileged status consists in. Fine appeals directly to a notion of ‘reality as it is in itself’, thus drawing a distinction between what merely obtains and what obtains *in reality* (2001: 26). Antirealism concerning a given subject matter consists in the denial that it obtains *in reality*. On this view, ‘I might accept that I am sitting and even accept that it is a fact that I am sitting, for example, but not accept that this fact is constitutive of how things really are’ (Fine 2005: 267). This notion of reality is a primitive concept around which the realism-antirealism debates revolve according to Fine.³

A more widespread picture, however, is one on which the privileged facts are privileged in terms of their position within a kind of layering structure. It is a common view that facts about fundamental particles determine those of compounds, which in turn determine the properties of larger compounds. Or, in terms of subject areas, it is

² As Williams also notes, ‘the idea that paraphrase is relevant to ontological commitment *prima facie* requires the distinctively Quinean translate-and-deflate philosophy of language’ (2012: 173; see Field 1994 for an exposition of the Quinean approach). Without this controversial view on the philosophy of language, it becomes unclear what the point is of paraphrases of committing ordinary language, in particular, it becomes unclear how the ‘paraphrase strategy’ does not presuppose the denial of the straightforward reading, thus really implying a simple error-theoretic antirealist view after all (Williams 2012: §6.2.1). Fine argues furthermore that this kind of metaphysics-induced paraphrase is unconstrained by genuine linguistic data, as well as in itself implausible, threatening to undermine our hold on what it is to be genuinely quantificational (2009: 162).

³ This is not to say that the whole of metaphysics revolves around the concept of reality. Fine (2012a: 40-41; 2012b: 9-10; manuscript) distinguishes between realist or foundational metaphysics, whose concern is with what is in reality the case, and naïve metaphysics, whose concern is rather with the nature of things regardless of whether these things are also constituents of reality. Naïve metaphysics will be discussed in §3.

commonly believed that physical facts determine chemical facts, that some of these in turn determine biological and geological facts, and that some of these in turn determine psychological, sociological, economical and, eventually, the common sense facts. Facts thus appear to have a place in a stratified structure of some kind. Given this picture, it is natural to think that facts have a metaphysically privileged status when they lie at the bottom layer (if there is one), being in an intuitive sense responsible for it all. They are the fundamental facts.

Different philosophers conceive of the layering structure in different ways. One might hold that one fact is constitutive of a ‘lower layer’ than a second fact when the first fact grounds the second fact, where this notion of grounding conveys a kind of metaphysical or non-causal explanation of what the grounded fact consists in (e.g. Fine 2001, 2012a; Schaffer 2009; and Rosen 2010).⁴ Or one might hold that one fact is at a ‘lower level’ than a second fact when the first fact matches the joints of nature more closely or is more natural than the second (e.g. Lewis 1983; and Sider 2011). Or one might hold that one fact is at a ‘lower level’ than a second fact when the first fact is a truthmaker for a proposition whose truth constitutes the second fact (e.g. Armstrong 1997; Melia 2005; and Cameron 2008).⁵ Or one might conceive of the layering in terms of reduction, or supervenience, or in yet other ways. Each view of the layering structure is controversial and has been met with reservations or criticisms.⁶

The debate over the best way to think of the layering structure is not directly relevant to our concerns. Since the different conceptions of the privileged status do not matter for our discussion here, allow me some terminological violence. I will introduce a notion of ‘fundamental reality’, modelled on Fine’s idea of reality, and use it as a covering term for the different conceptions of privileged facts mentioned above. So one might think of a claim of the form ‘in fundamental reality φ ’ as saying that it is the case that φ in reality as it is in itself, or that the fact that φ is fundamental or ungrounded, or that ‘ φ ’ is true and consists of perfectly natural or structural terms, or that the fact that φ is a truthmaker, and so on.⁷ Of course, lumping different conceptions together in this way is risky, and we need to be careful that our discussion really applies to the different conceptions of fundamental reality. But it is important to see that the issues that will be discussed have a very general character. Formally, I will follow Fine (2005: 268) in

⁴ See Correia and Schnieder (2012), and Bliss and Trogdon (2014) for an introductory overview of subtly different understandings of the notion of grounding. NB: though Fine accepts a grounding structure in the facts, and suggests that grounding might be a guide to what is real, he does not conceive of antirealist views directly in terms of the grounding structure (as opposed to, e.g., Schaffer). As Fine points out (2001: 22-24, 27-28), it might be for example that we believe that normative facts are not constitutive of reality, and yet that we also believe that any normative fact does not obtain in virtue of a non-normative fact, suggesting that our concept of reality must be independent from our concept of ungroundedness.

⁵ This way of tying truthmaking to a layered conception of reality is my own.

⁶ For criticisms of the intelligibility or metaphysical usefulness of grounding, see e.g. Daly (2012), Hofweber (2009), and Wilson (2014). For a critical discussion of naturalness and structure, see e.g. Fine (2013), Dorr and Hawthorne (2013: §3), and Eddon and Meacham (2015). For criticisms of truthmaking, see e.g. Daly (2005), Fine (2012a: §I.3), MacBride (2014), and Merricks (2007). For criticisms of reduction, see e.g. Fodor (1974) and Putnam (1967), and for criticisms of supervenience, see e.g. Fine (1994), Kim (1993: 144-46), and Wilson (2005).

⁷ On the truthmaker approach, we may want to distinguish between facts in the thin sense (mere truths) and facts in the thick sense (states of affairs, or circumstances); see Fine (1982: 51-55). We have a thin fact when we have a true proposition, and this is only also a state of affairs (i.e. truthmaker) when it consists in the instantiation by certain object(s) of a certain property or relation, which makes true the proposition that φ . In these terms, the relevant view is that ‘in fundamental reality φ ’ says that it is a state of affairs or circumstance that φ and not just true that φ .

thinking of the introduced notion of fundamental reality as an operator, so that ‘in fundamental reality φ ’ has the form of ‘ $R\varphi$ ’. Nothing will hinge on this; we could take it to be a predicate of facts instead – indeed, I will occasionally write in this way, when it aids readability.

The target of this paper is not the distinction between the fundamental and non-fundamental, as such. The target is the further meta-metaphysical claim that the realist and antirealist components of a total metaphysical theory can and should be understood as given respectively by what is taken to be part of fundamental reality and what is not. I will call the resulting approach fundamentality-based metaphysics. It recommends that we think of the traditional distinction between reality and appearance as a distinction, not between what is the case and what is not, but rather between facts that possess the privileged status of being constitutive of fundamental reality and those that do not (cf. Fine 2001, 2007: 23; and Sider 2011: vii).⁸ It recommends in particular that an antirealist view about a certain subject matter stated by φ consists in the denial that *in fundamental reality* φ . I will call this the fundamentality-based approach to antirealism. When a metaphysician excludes a fact from her worldview, she only excludes the fact from the privileged set of facts. Importantly though, when it is not the case that *in fundamental reality* φ , it might still be the case that φ . Fundamentality-based antirealists about numbers can straightforwardly believe that there are prime numbers between 1 and 9, for example. This means that this kind of antirealist view makes good on its key motivation, remaining untouched by the sort of Moorean counterarguments discussed above, and being thus free from the threat of trivial rejection, requiring no dubious paraphrases.

To be sure, one could perfectly well accept the layering structure in reality without also believing that the distinction between the fundamental and non-fundamental plays the role of the distinction between the realist and antirealist components of a metaphysical view. For example, one might think (with Lewis 1983) that there is a metaphysical structure to the world, and that this structure can help us better understand certain matters (such as reference, laws of nature, and intrinsicness), without also thinking that metaphysics is about sorting the fundamental from the non-fundamental, or about formulating views about what fundamental reality consists in.⁹

But many do seem to make the further meta-metaphysical assumption. Some are explicit about this assumption. Thus Fine writes that ‘metaphysics – or, at least, the relevant aspect of metaphysics – may be taken to be concerned with how things stand in reality. Thus a complete metaphysics will determine all truths of the form “in reality, ...”’ (2009: 172). And Sider explicitly states that ‘the goal of metaphysics is to give a fundamental description of the world’ (2011: viii). But perhaps more telling than explicit commitment is the fact that the fundamentality-based approach seems to be increasingly put in practice. We can legitimately speak of an ongoing ‘reorientation of metaphysics’ (Koslicki 2012: 186). Metaphysical views are increasingly formulated as being about fundamental reality. Thus, when Fine defends the A-theory of time, he understands it as the view that, in reality, tensed facts obtain (2005: §2). When Sider defends mereological

⁸ The notion of appearance has at least an experiential sense and a more epistemic sense (Chisholm 1959: Ch. 4; Jackson 1977: Ch. 2). The relevant notion here is the epistemic sense of appearance, according to which the ‘appearances’ are what strikes us as true (including for example that there are prime numbers), and not just that what appears to us in our experience.

⁹ Bennett (2011) and Rosen (2010) seem further examples of such an approach; but the difference between merely accepting metaphysical structure as an item of first-order metaphysics, and accepting it as what metaphysics is about is not always clear. Explicit denials of the connection between the layer-cake picture and the realism-antirealism distinction are particularly rare; for an exception, see Audi (2012: 101).

nihilism, he understands its key claim to be that ‘there is no fundamental part–whole relation’ (2013: 281). Barnes (2014) is no longer content to merely defend the obtaining of worldly indeterminacy, and turns to defending fundamental indeterminacy. Wilson (2012) defends the fundamental reality of determinables. And when Schaffer defends monism, he defends the view that ‘the cosmos is fundamental’ (2010: 31). If it isn’t fundamental, it doesn’t count. The central question is whether this concern with distinguishing the fundamental from the non-fundamental can substitute the realism and antirealism of the simpler error-theoretic kind. I will argue that it cannot.

The critical discussion will start by pointing out some unsatisfying ways in which the fundamentality-based approach shapes and restricts both our realist and antirealist views. Then we will turn to a discussion of the ‘layered world’ idea that, for many, informs the notion of fundamental reality. It will be argued that the facts that lie across the envisaged ‘layers’ very often conflict, and that the fundamentality-approach is unable to handle these conflicts. The discussion will then turn to the methodological picture that many take to motivate the fundamentality-approach. It will be argued that this motivating picture is flawed. The critical discussion will conclude with a diagnosis of the mentioned issues.

2. Unnatural restrictions on our realist and antirealist views

Say that I am a mereological nihilist and so an antirealist about macroscopic composite objects. What, according to the fundamentality-based picture, captures the negative import of my view concerning ordinary macroscopic objects such as tables?

Consider first of all a naïve view. One could think that the negative import of my antirealist view is captured by my belief that, in fundamental reality, there are no tables, i.e. the claim that *in fundamental reality*, $\neg(\text{there are tables})$. This naïve view has an obvious problem: it requires a non-factive conception of fundamental reality. We must deny that, if *in fundamental reality* ϕ , then ϕ .¹⁰ So, for instance, if *in fundamental reality there are no tables*, this better not imply that there are no tables, as this contradicts the ordinary fact that there are tables.

Now some believe that there are no negative facts (famously Wittgenstein in the *Tractatus*). But even if one believes that there are no negative facts in fundamental reality, one might still believe that there is some totality fact – a *that’s all* fact – that plays the role of the negative facts (see e.g. Armstrong 1997: §2.4.2; and Fine 2012a: §1.7). Thus the nihilist may believe that *in fundamental reality, there are only sub-atomic particles*. If the fact that *in fundamental reality, there are only particles* implied that there are only particles, this still conflicts with the ordinary fact that there are also tables, entities distinct from sub-atomic particles. It should be clear that the same issues arise for the fundamental reality of totality facts as for the fundamental reality of the negative facts. The discussion will from here on focus on negative facts.

Understanding fundamental reality as non-factive seems clearly misguided. Many theories of fundamental reality do not even allow for it to be non-factive. For

¹⁰ In Fine (2005), the notion of reality is employed in the formulation of non-standard A-theories that requires the non-factivity of reality for reasons that are particular to these metaphysical views; see Fine (2005: 297–298). Sider (2011: 152) argues furthermore that a Finean who uses a sentential reality operator is unable to distinguish between a nihilist and a deflationist view about a certain subject matter, unless the reality operator is non-factive.

example, on Schaffer's conception, who prefers to think of fundamentality as a predicate of facts, there is simply no room for a non-factive approach: if something is a fundamental fact, it is first and foremost a fact. Similar for the view of Lewis and Sider, which takes fundamentality to consist in truths formulated in perfectly natural terms: natural truths are first and foremost truths.¹¹ Note also that, if we deny the factivity of fundamental reality, we also have to deny the closely related principle that if *in fundamental reality* φ , then ' φ ' is true. This principle (that if *in fundamental reality* φ , then ' φ ' is true) in combination with the left-to-right direction of the Truth Schema (that if ' φ ' is true, then φ) straightforwardly implies the factivity of reality (that if *in fundamental reality* φ , then φ). So we would have to allow, for instance, that *in fundamental reality there are no tables*, and yet that the sentence 'there are no tables' is false and the sentence 'there are tables' is true. Fundamental reality would not suffice for the truth of the sentences that describe it and the contents of reality would at least sometimes be stated by falsehoods. There would seem to be no independent motivation for these awkward consequences.

So, for the fundamentality-based approach to be plausible, the negative import of our antirealist views should be captured without admitting that the absence of the relevant matters is itself part of fundamental reality. There are different ways of fleshing this out. One natural way is to think that the negative import of my nihilist view, for example, is captured by my belief that it is not the case that, in fundamental reality, there are tables, i.e. the claim that $\neg(\textit{in fundamental reality} \text{ (there are tables)})$, with negation taking wide scope. A different approach, proposed by Fine, takes the negative import of my nihilist view to be captured by the claim that, if something is a table, it is not involved in any of the real facts, i.e. the negative import is captured by a statement of the form ' $\forall x(Tx \rightarrow \neg\exists\varphi(R[\varphi x]))$ ' (with 'R...' standing for 'in fundamental reality...'); see Fine (2009: 168).¹² What these two approaches share is a strict adherence to the factivity of our notion of fundamental reality, and to the idea that antirealism about certain matters concerns their lack of fundamental reality. Note in particular that the factivity of fundamental reality requires a scope restriction on negation, with the relevant true claims only involving negations of the fundamental reality of the relevant matters.

Fundamental reality must now be internally incomplete, in the sense that it is not the case that for any φ , either *in fundamental reality* φ or *in fundamental reality* $\neg\varphi$. To be sure, this incompleteness of fundamental reality is unsurprising, even required, on some ways of thinking of fundamental reality. Consider for example a ground-theoretic account of fundamental reality according to which to belong to fundamental reality is to be an ungrounded fact. Such a view simply cannot hold that for any φ , either φ or $\neg\varphi$ is ungrounded (i.e. fundamental). Suppose for instance that φ is a conjunction of two

¹¹ Taking the relevant negative truths to be fundamental also violates Sider's Purity constraint, which says that 'fundamental truths only involve fundamental notions' (2011: 106, §7.2). If 'there are no tables' were a fundamental truth, it would involve 'table' which is not a fundamental notion on the nihilist view. If only totality facts are fundamental, this might offer a way around this.

¹² This formulation has the odd consequence that if one does not believe in the mere fact that tables exist, it becomes vacuously true to say $\forall x(Tx \rightarrow \exists\varphi(R[\varphi x]))$: simple antirealism about tables qualifies one automatically as a realist in the fundamentality sense on this formulation (2009: 169). Fine notes this problem and thinks it instead shows that a realist/anti-realist debate about Fs rests upon supposing that there are Fs (2009: 169). This means that we lose the continuity between the antirealist concerns of metaphysics and the more mundane antirealist views concerning ghosts and witches, where we are not willing to suppose that there are these things. This seems to me to be a serious cost, undermining our hold on what it means to be an antirealist about something.

ground-theoretically independent statements (so of the form ' $\varphi_1 \wedge \varphi_2$ '), and is true. Then φ is grounded in its two conjuncts (on the standard approach to grounding), and $\neg\varphi$ is not grounded since it is false. So neither φ nor $\neg\varphi$ is ungrounded in such a case.¹³ Now one might be unhappy with the internal incompleteness of fundamental reality, since one might think that the realist component of our metaphysical theory *should* form something like an internally complete picture of the world and that, to the extent the notion of fundamental reality cannot reasonably be expected to provide a completed totality, the latter is ill-suited to provide the realist component of our metaphysical theory. But it is unclear whether this is a very pressing worry. After all, the very idea of fundamental reality is that of a special part of the totality of facts and so one might think that it is just part of the intended revisionary aspect of the fundamentality-based approach that we should stop expecting the realist component of our metaphysical theory to form a complete totality of facts.

But the imposed restrictions on our realist views go far beyond merely requiring us to abandon the internal completeness of our realist view of the world. Given that the notion of fundamental reality is factive, the ordinary facts do not merely constitute the appearances that need to be somehow accounted for within fundamental reality (a reasonable desideratum), they furthermore logically restrict what facts we can include in our realist picture. If it happens to be an ordinary fact that φ , then for any ψ that is incompatible with φ , it cannot in fundamental reality be the case that ψ . As a mereological nihilist, for example, I am now barred from believing that, in fundamental reality, no pluralities of particles form wholes; or that, in fundamental reality, all objects are simple; or that, in fundamental reality, no two distinct things stand in parthood relations to each other. All these facts seem to capture something of the general character of the world according to my realist view, and yet they are banned from being included in my realist view (i.e. banned from being part of fundamental reality) on pain of contradicting the mere facts. Indeed, these facts would seem to get to the heart of what mereological nihilism is about, and yet there is no longer any room for them within the realist component of my metaphysical worldview. Given what is required for there to be a plausible metaphysical structure in the world, putting that same structure in the service of playing the role of the realist and antirealist components of our metaphysical views severely limits what sort of facts may be included within our realist conception of the world. The metaphysician cannot believe in the fundamental reality of anything that conflicts with the ordinary facts, simply because of how the meta-metaphysical framework is set up.

Whereas the realist component of a metaphysical theory seems unduly constrained in excluding matters that a metaphysician may reasonably want to be part of her realist view, the antirealist component of her metaphysical theory seems unduly constrained in including certain matters that she may want to exclude. If we assume that a statement of the form ' $\neg R \exists x(x \text{ is a table})$ ' (i.e. 'it is not the case that *in fundamental reality* there is a table') expresses an antirealist stance on the presence of tables, then a statement of the form ' $\neg R \neg \exists x(x \text{ is a table})$ ' expresses an antirealist stance on the absence of tables. And the latter turns out to be true whenever the first one is. Remember, to maintain the wide-scope strategy, we need a strict distinction between statements of the form ' $\neg R\varphi$ ' and those of the form ' $R\neg\varphi$ '. With regard to the latter, then, we must either

¹³ Thanks to an anonymous referee for pushing this point, and for offering this particular illustration in support of it.

believe that relevant statements of the form ‘ $R\neg\varphi$ ’ are syntactically ill-formed, or that they are meaningful but false. There seems to be absolutely no good reason to believe that the relevant statements of the form ‘ $R\neg\varphi$ ’ are syntactically ill-formed, or not candidates for truth or falsity. So it seems that statements of the form ‘ $R\neg\varphi$ ’ must be false in the relevant cases and statements of the form ‘ $\neg R\neg\varphi$ ’ are true. This has the consequence that my nihilist view now includes a forced antirealism, not just about the presence of tables, but equally about their absence: not only do I say that $\neg R\exists x(x \text{ is a table})$, I will also have to say that $\neg R\neg\exists x(x \text{ is a table})$. My metaphysical view now says that my table is neither present nor absent from fundamental reality; its existence and non-existence are equally unreal. But that does not capture my nihilist view of things at all. Far from capturing my belief in the absence of tables in the world, I am forced to deny it in the very same way in which I deny the presence of tables.

Not only do we lose the distinction between the absence and presence of tables, equally denying the fundamental reality of both, we also lose the distinction between the statements of the absence of tables and outright falsehoods. The claim that there no tables comes to have the same status as the claim that $2+2=5$ or the claim that there are witches. We both deny that $2+2=5$ and that *in fundamental reality* $2+2=5$; and we both deny that there are witches and that *in fundamental reality* there are witches. These matters belong neither to reality, nor to the world of appearance as it were. To maintain the wide-scope strategy, the same needs to be the case for the claim that there are no tables: we both deny that there are no tables and that *in fundamental reality* there are no tables. The claim that there are no tables, just as the claim that $2+2=5$, is neither assertible on the street, nor in the metaphysics room (cf. Sider 2011: §5.3). But that seems misguided: as a mereological nihilist, I want to say that the sentence ‘there are no tables’ *is* surely descriptive of the world in some way that the sentences ‘ $2+2=5$ ’ *is not* descriptive of the world. There is a crucial distinction between these according to my mereological nihilism, and this gets lost on the fundamentality-based approach.

Thus, to maintain a factive understanding of fundamental reality, the apparent facts logically restrict the contents of my realist view of the world, banning for example the facts that would seem to capture the general character of the world according to that picture, I am forced to be as much an antirealist about the absence of tables as I am about their presence, and I am unable to recognize any distinction in descriptive adequacy between such sentences as ‘there are no tables’ or ‘there are only sub-atomic particles’ and sentences such as ‘there are witches’ or ‘ $2+2=5$ ’. In short, given a factive understanding of fundamental reality, there is no room for a conflict between reality and the world of appearance, and this shapes our realist and antirealist views in various unsatisfying ways.

3. *Conflicts across the layers*

The fundamentality-based approach is informed by the idea of a layered conception of reality, which – to repeat – is naturally thought to be one of physics determining chemistry, in turn determining biology, geology and astrology, in turn determining psychology, sociology, economics, and the common sense facts. But there is a serious issue with this layered picture. The (non-fundamental) facts that are meant to lie at ‘different levels’ are often in deep conflict. When the non-fundamental facts are understood to consist in genuine facts, as the fundamentality-based approach

recommends, any conflict across non-fundamental layers gives rise to outright incoherence.

Imagine three descriptions of the world: (1) a description of the world in terms of the fundamental sub-atomic particles posited by physics and their interactions, (2) a description at a slightly larger scale, say in terms of atoms and their interactions, (3) and a description in terms of ordinary macroscopic objects and their interactions. Let us also imagine that we believe that, *in fundamental reality*, there are only the sub-atomic particles of physics (quarks, leptons, bosons, etc.), and that features of both atoms and macroscopic objects are assumed to be grounded in or dependent on features of the sub-atomic particles.

The two non-fundamental descriptions – the atomic and macroscopic – offer conflicting views of the world. Think for example of solidity. Let R be the spatial region carved out by the outer boundaries of a steel table. When we think of the table as an ordinary macroscopic object, we think of a four-legged object whose material is a solid chunk of steel, entirely filling region R . Given this ordinary conception of the table, it seems right to say that region R is filled through and through by the table in the sense that there are pretty much no unfilled sub-regions. But when we think of region R as being occupied by the atoms that make up the table, we think of the very same region as being almost entirely empty. Only a few minuscule specks of the region are occupied by the nuclei of the atoms and the rest is just empty space – given that atoms consist for 99.99999% of empty space. The atomic and macroscopic facts thus conflict: from the fact that R is occupied by an ordinary steel table, it follows that R is not almost entirely empty space, and from the fact that R is occupied by atoms, it follows that R is almost entirely empty. So the atomic and macroscopic facts conflict; it follows from them that R both is and is not almost entirely empty. We either need to deny that R 's being occupied by a collection of atoms implies that it is almost entirely empty, or we must deny that R 's being occupied by a table implies that it is not almost entirely empty.¹⁴

Consider first the option of denying that R 's being occupied by a table implies that R is not almost entirely empty. One might think we should never have thought that we can accept just any common sense judgment, and that we only accept the world of ordinary talk *as corrected by science*. We have all learned about the atomic model and, one might think, we have long known that a table's solidity does not consist in its being solid in the naïve sense of entirely filling the region that it exactly occupies. So we might think that there just is not any kind of solidity as we naïvely thought there was because we have learned that something's being solid just means that it consists of atoms forming certain bonds that render the material relatively impenetrable.

But this kind of reply undermines the picture of a layered reality. Surely the claim that the table consist of more empty space than stuff was surprising, and is still something we need to remind ourselves of. It is arguably not how we ordinarily conceive of things. It cannot plausibly be claimed that, when we deny that R 's being occupied by a table implies that it is not almost entirely empty, we still secure the common sense fact that there is an ordinary solid table in region R – the sort of table that figures in our ordinary thought and everyday dealings with the world. We cannot think of solidity as consisting in the bonds and interactions of atoms whilst thinking of solidity as a property of an ordinary macroscopic table as it features in our everyday conception of the world, as the relevant bonds and interactions are precisely the bonds and interactions of atoms and we

¹⁴ The non-solidity of tables is assumed in Eddington (1928: 342), the revision in our concept of the solidity of tables is defended in Stebbing (1937); references taken from Sider (2013: 254).

do not go about thinking solely of collections of atoms. When I think of a macroscopic object occupying region R , I thereby do not think of R as being 99.99999% empty space; and when I think of region R as almost entirely empty space, I do not think of it as occupied by an ordinary macroscopic object. This line of reply consists in paraphrasing our ordinary claims about tables into claims about the bonds and interactions of (almost entirely empty) atoms and, more importantly, for this paraphrase to have any point, it must be combined with a simple error-theoretic antirealism about facts concerning solidity in the ordinary sense. If we say that science ‘revises’ our ordinary concept of solidity, we collapse the macroscopic level into the atomic level, forcing us to think of atoms and their bonds whenever we speak of solid tables. With regard to solidity in the ordinary sense, we cannot but adopt a simple antirealism in this case and deny that the table is solid in the ordinary sense (the sense that implies full occupation of any sub-regions), and that the belief that this fact obtains is false. There is therefore no stable division between layers of reality within this kind of response, given that coherence requires us to withdraw to a simple antirealism about facts concerning solidity in the naïve sense.

Consider instead the alternative option of denying that R ’s being occupied by a collection of atoms implies that R consists almost entirely of empty space. This option seems very implausible. The claim of physicists was not that the concept of solidity does not apply, it does apply, only to a miniscule portion of what we thought it would apply to, namely the atom’s nucleus, and they have shown to our surprise that an atom consists almost entirely of empty space. If we deny this, we immediately face the sort of Moorean arguments that adherents of fundamentality-based metaphysics are out to avoid.

If we somehow refrain from the simple antirealism about naïve solidity and we accept that the table is solid in the naïve sense, and yet we also think that the table parcels up into a collection of (almost entirely empty) atoms, we already have the result that the region is both full and not full, and this is just incoherent double-think. Simply stacking the facts does not help. There is on the fundamentality-approach either a collapse of levels due to some kind of paraphrase (involving a forced adoption of simple error-theoretic antirealism regarding the unrevised), or outright incoherence.

The case of solidity is not an isolated case. The supposed layers are full of incompatible properties. Think for example of one of popular science’s favourite: on the atomistic conception of things, it turns out that nothing is ever in contact with anything else – due to electron repulsion. This seems just false when I think of the world of ordinary macroscopic objects. Or perhaps a simpler example: when I think of the world in macroscopic terms, all kinds of surfaces seem flat, without bumps (Unger 1971: 203), but when I think of my table’s surface in microscopic terms, I think of it as full of bumps and hence not flat. So is my table flat? If I think it is, I am forced to think of the atoms as not making up the table but rather as somehow sitting in smoothly circumscribed objects besides the atoms, and if I think there are no flat objects, I need to somehow think of my table as lacking a flat surface, which I make sense of by thinking of a collection of atoms, not an ordinary table.¹⁵

¹⁵ One might think that this is a bad example because ‘is flat’ is a relative or context-sensitive predicate that expresses different properties in different contexts of use. See Unger (1971) for arguments supporting the idea that ‘is flat’ is an absolute term that simply expresses that something is without bumps. In any case, these linguistic matters are beside the point. We could run the argument with ‘is absolutely without bumps’ as well (a predicate that certainly expresses that something is without bumps, and that I would use just as well to describe the flat surface of my steel table).

The conflicts are also by no means restricted to clashes between the microscopic and macroscopic. Consider the clash between an ordinary and naturalistic conception of events. When I ordinarily think of the assassination of an innocent person, I think of the event as susceptible to normative properties, as being either right or wrong. But, as a naturalist, I might think of the world as consisting only of material events, in which nothing happens that is right or wrong, and in which no event has a ‘not-to-be-doneness somehow built into it’ (Mackie 1977: 5). On this conception, I take the assassination of an innocent person to be an event consisting only of various material goings-on, of the triggering of a gun, of arteries that are ruptured, of a dropping blood pressure in the victim, and so on. When I think of the assassination as an agglomeration of material goings-on, I do not just refrain from thinking of it as governed by norms, I think of it as *not* governed by norms, as being neither right or wrong; the material goings-on just happen. But now consider the time and place of the assassination. The ordinary conception implies that something wrong happened at that time and place, the naturalistic conception implies that nothing wrong (nor right) happened at that same time and place. So the relevant time and place are subject to conflicting descriptions. Again, we cannot simply stack the normative on top of the material event, rather there is either a collapse of layers (involving a forced adoption of simple antirealism with regard to one of the descriptions), or incoherence.

The idea that we can simply accept the deliverances of common sense and science and bring them together in one structured or layered conception of the world fails to be sensitive to the deep conflicts that are found across the layers of this envisaged structure. These tensions cannot be resolved by deeming one or other fact non-fundamental, given that the non-fundamental facts are all genuine facts.

One might think that we can simply allow that metaphysics should sort out these conflicts before starting the further metaphysical project of separating reality from the world of mere appearances. Fine (2012a; 2012b; manuscript) argues for a distinction between what he calls naïve metaphysics and foundational metaphysics. Where the aim of foundational metaphysics is to figure out what fundamental reality is like, the aim of naïve metaphysics is to figure out ‘the nature of things without regard to whether they are real’ (2012a: 40-41). Fine (manuscript) argues furthermore for the priority of naïve metaphysics, making it clear that we first have to figure out what the appearances are before we are in a position to figure out what reality lies behind them. One might think, therefore, that the fundamentality-based metaphysician could admit the discussed problems as problems for naïve metaphysics, and treat their resolution as an ‘essential prolegomenon’ to foundational metaphysics (Fine, manuscript). We can then trust that conflicts and incoherence will be sorted out before we turn to foundational metaphysics.

But *if* naïve metaphysics is indeed meant to eliminate all the conflicts and incoherence in the ordinary facts, one wonders how it is any different from the traditional metaphysics that was meant to be replaced with the fundamentality-based metaphysics.¹⁶ In particular, if we find that different families of apparent facts clash, as we do, then we are forced to deny apparent facts after all through being forced to adopt revisions, which means that we are back facing the threat of trivial counter-arguments again on the basis of any facts that support the apparent facts that were denied. In our solidity example: if we deny the solidity of tables, we fly in the face of common sense, but if we deny the

¹⁶ I think there is a serious ‘*if*’ here; perhaps naïve metaphysics is meant to be solely a concern with the nature and essences of things and not so much with resolving conflicts in the ordinary facts. In this case, though, naïve metaphysics does not answer the worry raised here.

near emptiness of atoms, we fly in the face of scientific discoveries. In the case of conflicts between apparent facts, total Moorean modesty is simply unavailable. If we first need to engage in standard (naïve) metaphysics, and sort out what facts obtain regardless of whether they are fundamental or not, the standard forms of realism and antirealism are still firmly in place, whatever we call them, given that there will be apparent facts that we will be forced to deny, due to accepting other apparent facts that conflict with them. Complementing fundamentality-based metaphysics with a prior naïve metaphysics undermines any interpretation of fundamentality-based metaphysics as offering a new or non-standard way of understanding the traditional distinction between realism and antirealism, and it undermines the supposed motivation for turning to the fundamentality-based approach to antirealism, namely the difficulties we face in revising apparent facts. What has been introduced is not, then, a new revolutionary approach to realism and antirealism; what has been introduced are just further distinctions that we may draw within realist views simply construed. This undermines fundamentality-based metaphysics as it has been understood here, namely as a new approach to the realism-antirealism distinction that is meant to supplant the more standard approach, and which should not be understood as merely introducing a further matter we have to sort out when we have somehow completed the task of drawing the reality-appearance distinction as traditionally understood.

Note also that the conflict across non-fundamental layers raises some further suspicions concerning the problem of unnatural restrictions imposed on our realist and antirealist views, which we discussed in the previous section (§2). It turns out that the absences that we may want to make room for in our antirealist views (but cannot), are the very kinds of absences that also occur at the various non-fundamental layers, which – when understood as genuine facts – similarly lead to incoherence. It seems in retrospect that we were introducing restrictions on our beliefs concerning fundamental reality in an attempt to navigate the conflicts between reality and appearances, only to find similar threats of incoherence across the non-fundamental layers that are taken to structure the world of appearances, and where there is no notion of fundamental reality to tinker with so as to draw up similar restrictions.

4. The methodological picture motivating fundamentality-based metaphysics

We discussed how the reorientation of metaphysics is motivated by methodological considerations. Adherents argue that when we reformulate realist and antirealist views as really being about the contents of fundamental reality, the resulting views no longer revise truths of common sense or science, and thus become insulated from trivializing counterarguments (e.g. Fine 2009: 158, 169; and Schaffer 2009: fn. 8). Common sense and science supply the mere facts; metaphysics should be understood as figuring out where they are in the layering structure. I will argue that there are serious issues with this motivating picture.¹⁷

¹⁷ The motivating picture has been criticized by others. Daly and Liggins (2014; see also their 2010) argue that common sense judgments do not have the justificatory status that adherents of fundamentality-based metaphysics seem to attribute to them, and that it is a mistake to think that results from other sciences cannot be overturned by philosophical argument. Kroon and McKeown-Green (forthcoming) argue that there is no substantial difference between metaphysical and common sense dealings with existence and

Start with the idea that fundamentality-based metaphysics can claim an insulation from common sense facts and scientific deliverances because it does not revise or deny any of the mere facts. This is not right. As we discussed earlier, questions of metaphysical structure are straightforwardly dependent on the status of the candidates for grounding, naturalness or truthmaking, due to their factivity: if it turns out not to be a fact that φ , then it is ipso facto neither fundamental nor non-fundamental. On the fundamentality-approach, the metaphysician must start on the basis of a plausible assumption of how the facts will be settled in other domains. But the problem is that the facts are not completely settled outside of metaphysics, nor will they be.¹⁸ I discussed a particular kind of case of this in the previous section (§3), namely the facts that are meant to be found across the layering structure. But the problem is much more general, and also occurs intra-level as it were. Common sense verdicts about facts can conflict on issues of metaphysics that bear directly on what the metaphysical structure of the world could or could not look like.

Consider an example. It sounds intuitive enough to say that Conan Doyle created Sherlock Holmes. From this it seems to follow that there is something that Conan Doyle created, that the created something is Sherlock Holmes, and hence that Sherlock Holmes exists. But it sounds equally intuitive to say that Sherlock Holmes does not exist; that there is no Sherlock Holmes. Schaffer believes that we should accept the first common sense verdict, that Conan Doyle created Sherlock Holmes and hence that Sherlock Holmes trivially exists (Schaffer 2009: 359). But there is nothing trivial about this when there are countervailing intuitions to the contrary, and there are, given that we believe that Sherlock Holmes does not exist. Schaffer's notes this worry, and his reply (in full) is this:

[O]ne might object that there are countervailing intuitions of unreality. Indeed, with fictional characters like Santa Claus, it is often natural to say that Santa is not real (e.g., this is a natural way to correct the child who believes in a flesh and blood Santa). But 'real' is used flexibly in ordinary English to mark a multitude of distinctions. For instance, it can be used to mark the existent/non-existent distinction, the objective/subjective distinction, and the basic/derivative distinction, *inter alia*. Further, even intuitions directly targeted to non-existence can be explained away via *quantifier domain restriction*. (Schaffer 2009: 360).

That 'real' may be used in a multitude of ways is a red herring. Forget about 'real' if one wants. Santa Clause and Sherlock Holmes do not exist; there is no Santa Claus, just as there is no Sherlock Holmes. There are no special technical terms in these claims, and the claims demand as much plausibility as the claim that Conan Doyle created something. One might try to explain away the intuition via quantifier domain restriction, but this requires precisely the sort of paraphrase that simple error-theoretic antirealists appeal to when faced by trivial counterarguments, such as in the case of the nominalist who aims to undermine the intuition that there are prime numbers. When we claim – here, now –

reality questions, defending this claim from objections made by Fine (2009). The criticisms following here are different, though I think roughly in the same spirit.

¹⁸ Fine (2009) notes that certain existence questions may be such that common sense and science are silent about them, such as concerning the existence of concrete possible worlds, but deems them 'exceptions to the rule' (2009: 158). Gaps in common sense may or may not be rare, but conflicts are certainly common in many cases of metaphysical concern.

that Sherlock Holmes does not exist, this does not make any claims about what is non-fundamental, or mind-dependent, nor is there some other covert restriction lurking in the syntax, and yet it sounds plausible (cf. Schaffer 2009: 257). The point is simple: common sense gives credence to the belief that Conan Doyle created something and that to create something is to make it exist, but it also gives credence to the belief that Sherlock Holmes does not exist. If he exists, then there is a question about where facts concerning it are in the metaphysical structure, if he doesn't exist, such questions do not arise.

Whenever common sense is in conflict, their resolution will interfere with common sense, denying one or other common sense judgment. Metaphysics is full of puzzles drawing out all kinds of conflict in our common sense conception of the world. We think that a lump of clay survives squashing, that the statue composed of the clay does not, and that no two objects can exist at the exact same place at the same time (Gibbard 1975). We think that I am somehow constituted by some collection of particles, that a particle is definitely part of me when it is part of the collection of particles that constitutes me, and that every particle is definitely part or not of any collection of particles, but also that not every particle is definitely part of me or not, as witnessed by outermost scales of skin or loose-hanging hairs (Unger 1980). We initially think that we go where our brain goes, in case it is transplanted to a new body. But what if two brain hemispheres are transplanted to different bodies (Wiggins 1967: 50)? One way or another, solving this question about the mere facts will be prior to any question of what personal identity is grounded in. Clearly, common sense is full of conflicting verdicts on metaphysical issues and we cannot presuppose a coherent body of facts without begging questions and settling all kinds of metaphysical issues, issues that bear on what things are fundamental and what things are not. As we saw in the previous section as well, the metaphysician cannot avoid revising mere facts. Any difficulties in doing so are difficulties that the fundamentality-based approach does not and cannot avoid.

So the idea that fundamentality-based metaphysics can claim an insulation from common sense facts and scientific deliverances because it does not have to revise or deny any of the mere facts seems clearly mistaken.

Consider secondly the closely related idea that the simple approach to antirealist views is susceptible to Moorean or trivializing counterarguments, whereas the fundamentality-based approach to antirealist views is not susceptible to such counterarguments. This too does not seem right. Moorean counterarguments are valid arguments whose premises are very plausible or well-established, much more so, perhaps, than the typical or currently known philosophical reasons for rejecting the conclusion that they establish.¹⁹ To the extent that possible error-theoretic antirealist views are susceptible to such strong counterarguments, possible views about fundamental reality may face Moorean counterarguments just as well. The sciences deliver information about what facts consists in, and fundamental physics in particular informs us about the constitution of fundamental reality.²⁰ Far from an autonomous intellectual niche then, views about the layering structure and about the contents of the

¹⁹ For criticisms of stronger readings of Moorean arguments, see Paseau (2005), Daly and Liggins (2011), and Sider (2013: §2).

²⁰ This is explicitly acknowledged in Sider (2011: 347), who also does not motivate his concern with 'fundamental language' on the basis of Moorean modesty. Sider motivates the reorientation of metaphysics by arguing that it is required to secure a reply to deflationism, in particular to the quantifier variance of Hirsch (2005). I have not discussed this motivation. For what it is worth, it seems to me that this motivation fails because the various forms of deflationism (incl. quantifier variance) face inherent problems, for which see e.g. Hawthorne (2009), Horden (2014) and Button (manuscript).

bottom layer face pressures from common sense and science as much as views about what the mere facts are and, as a consequence, they are themselves in no way insulated from trivial counterarguments.

To illustrate, consider the view that neurophysiological facts rest on mental facts, or that all natural facts obtain because of normative facts, or that Socrates exists in virtue of the fact that {Socrates} exists, or that snow is white in virtue of the fact that 'snow is white' is true, or that tables exist in virtue of the fact that a mind has certain experiences. Any of these views faces trivial counterarguments just as much as the claim that there are no numbers. When science convincingly shows that heat consists in kinetic molecular energy, hard pressed would be the philosopher who nevertheless holds that, vice versa, kinetic molecular energy consists in heat. Clearly such a view will remain wildly implausible for as long as incredibly strong arguments are not forthcoming. If particle physics tells us that all kinds of chemical and physical processes consist in the interactions of particular particles governed by certain kinds of laws, hard pressed would be the philosopher who holds that fundamental reality consists of only ordinary macroscopic objects and that the fundamental particles depend on features of the macroscopic objects we take ourselves to engage with. That any of these views seem implausible should not lead us to reorient metaphysics just so that these views do not face a rejection that seems too quick, or unsophisticated. Pending strong philosophical arguments in favour of these views, we simply reject the relevant views. In the very same way, the denial that there are prime numbers can seem very implausible, but this does not motivate an overhaul of metaphysics. There is no methodological asymmetry here. Just as we can say to the nominalist who believes that there are no numbers 'good luck convincing the experts in the mathematics department that they are wrong and that there are no prime numbers' (cf. Lewis 1991: 58-59), in the same way we can say to the Platonist who believes that fundamental reality consists of Forms and not elementary particles 'good luck convincing the experts in the physics department that they are wrong and that there are in fundamental reality no elementary particles but only Forms'.

An adherent of the fundamentality-based approach might want to reply that the methodological argument in favour of fundamentality-based antirealism should have been understood more comparatively. Instead of concerning an all-or-nothing affair of whether a possible view is susceptible or not to trivial counterarguments, a more moderate view is that, whenever we have a choice between adopting a simple error-theoretic antirealism and adopting a fundamentality-based antirealism, the latter will turn out to be – generally speaking – more plausible. When offered the choice between saying that there are no numbers and saying that numbers fail to be part of fundamental reality, it is the latter that is under less pressure from common sense or scientific views, or so one might think.

But it is far from clear that the simple construal of antirealism will be in general less plausible than the fundamentality-based construal of it. Simple error-theoretic antirealism can do large-scale theoretical work for us, theoretical work that cannot be done by a fundamentality-based construal of the relevant antirealist view. The point of holding an antirealist view about certain matters is very often to undermine certain kinds of insoluble questions. A central motivation for thinking that there are no numbers, for example, is that the existence of numbers raises questions that seem either unanswerable, or only answerable in ad hoc or irrational ways. The most well-known awkward explanatory burden in this case is epistemological (Benacerraf 1973; and Field 1989: 25-30). Numbers are not in space or time, and do not stand in causal relations to us or interact

with anything we can observe. This gives rise to the question: what explains the gradual emergence of knowledge about, say, the natural number series? The transition from being ignorant about a mathematical fact to possessing knowledge of that fact cannot be explained through the kinds of dynamic interactions that typically explain how a subject can come to know things about worldly facts. So what does explain this? If there are no numbers, then we do not face the question of how we can make epistemic contact with them, allowing our epistemological views to be possibly more elegant and less complex, and it is this consequence of nominalism that makes it worth considering in detail – regardless of its *prima facie* implausibility. Within the standard framework, to deny that it is the case that φ bars our belief that φ from being knowledge, and hence undermines any need to explain knowledge concerning the alleged fact that φ . On the fundamentality-based framework, in contrast, an antirealist still accepts that it is the case that φ and still accepts that we know that φ , which means that antirealism is of no help in avoiding or undermining questions of epistemic contact. Similar considerations apply to the moral case – if moral facts genuinely obtain, this raises the question as to how we know that they obtain and how they hold their motivational sway over us (see Mackie 1977: 39).

Awkward questions are by no means restricted to epistemological ones. If an object a exists, then for any open formula $\varphi(x)$, a satisfies it or not. And so there arises the question whether a satisfies the open formula or not. Thus in the case of abstract objects, if the number 2 (non-fundamentally) exists, we face the question: does the number 2 satisfy ‘= $\{\emptyset, \{\emptyset\}\}$ ’ or does it satisfy ‘= $\{\{\emptyset\}\}$ ’? As Benacerraf pointed out, given the existence of numbers and sets, there will be a fact of the matter concerning which is identical to which, and this gives rise to a seemingly arbitrary choice concerning the identification of different types of abstract objects (Benacerraf 1965; and Field 1989: 20-25). Antirealism of the simple error-theoretic kind avoids such arbitrariness because it denies there is anything of which we can ask whether it satisfies a given open formula or not; fundamentality-based antirealism does not. Or consider mereological nihilism again, the view that there are only fundamental particles. Construed as a simple antirealism, nihilism undermines the question concerning the exact boundaries of macroscopic entities. Something that does not exist does not have exact boundaries. But if there is a mountain, then for any location in space, there is a question whether the mountain is located there or not, and for any part, we can ask whether it is part of the mountain or not. These questions remain there even when mountains exist only non-fundamentally.

The point is not that we should be error-theoretic antirealists about all kinds of matters; the point is that no general comparative claim can be made about the plausibility of simple antirealism versus fundamentality-based antirealism. Simple antirealism is able to shift or undermine large swathes of awkward explanatory burdens that arise from ordinary and scientific conceptions of things. Excluding certain facts from the fundamental realm does no such work for us. Not only does this mean that fundamentality based antirealism lacks the powerful leverage possessed by simple error-theoretic antirealism in balancing out its cost, rendering a general comparative claim highly dubious, it also means that fundamentality-based antirealism does not offer that which many search in antirealist views, failing to speak to what is perhaps *the* central motivation for such views. At most, fundamentality-based antirealism can attempt to answer some of the awkward explanatory questions head-on by appeal to the layering structure (cf. Schaffer 2009: 361), but that is cold comfort in comparison to an approach that is able to set aside the questions, instead of having to answer them somehow or other.

In short then, the picture that is meant to motivate a reorientation of metaphysics seems flawed. Common sense will not plausibly deliver a coherent body of facts requiring no metaphysical work other than sorting out their metaphysical structure. Fundamentality-based antirealism is not somehow less susceptible to common sense and scientific impingements, or less susceptible to the possibility of trivial counterarguments on the basis of such impingements. Nor does a fundamentality-based construal of an antirealist view score better on a costs and benefits analysis, on the contrary, whenever a simple antirealist view is under a strong pressure from common sense or science, brought out by trivial counterarguments, it at least holds out a promise of being able to off-set this strong intuitive pressure by the large-scale philosophical work it does for us, simplifying our epistemological views and possibly cleansing large chunks of our overall conception of the world from unanswerable and suspicious explanatory burdens. Fundamentality-based antirealism offers little in comparison and seems thereby, ironically, to a greater extent at the mercy of common sense and science. If we can expect any substantive or revisionary antirealist views that, perhaps surprisingly, hold up to an overall weighing of pros and cons, we can expect them to be of the simple error-theoretic kind. We thus arrive at a picture that is almost the exact opposite of the one motivating the ongoing reorientation of metaphysics. To put the picture in black-and-white: it is up to the metaphysician to help figure out what the mere facts are, that is where its main task lies, if anywhere, and when we have figured out the facts, we can reasonably expect that common sense and in particular science will tell us which of the facts are constitutive of fundamental reality and which are not. Metaphysics needs to concern itself with questions of fundamental reality only if and only where there are conflicting common sense or scientific verdicts about what is more fundamental than what.

5. *Concluding remarks: reality, appearance and metaphysical structure*

Metaphysical views traditionally draw a distinction between reality and appearances, where we are understanding appearances in an epistemic way, with matters being made apparent, not only through our perception and observations, but also through successful theorizing or common sense ways of thinking about the world. The simple and fundamentality-based approaches can be understood as offering competing accounts of the two sides of the reality-appearance distinction. On the simple (error-theoretic) view, reality consists in matters that obtain and appearances in matters that fail to obtain. That is, the simple error-theoretic approach adopts the following schemas concerning the traditional notions of reality and appearance:

in reality φ iff φ
 not: if *it appears that* φ , then φ

The simple view adopts a notion of reality that coincides with the notion of obtaining facts and adopts a non-factive understanding of appearances.²¹ The non-factive notion of

²¹ Note how the given understanding of reality forces a non-factive understanding of mere appearances. To see why, assume for the sake of argument that appearance is factive, that if *it appears that* φ , then φ . Combined with the right-to-left direction of the reality schema – that if φ then *in reality* φ – we would have the consequence that if *it appears that* φ then *in reality* φ . Any appearance would be part of reality, and

appearance admits of different accounts. Non-factive conceptions of appearances are for example found in fictionalist views (assuming that *in the fiction* φ , does not imply that φ) or error theories (where having *the belief* or *experience* that φ , does not imply that φ).

The fundamentality-based approach invites us to a different understanding of the reality-appearance distinction (see Fine 2007: 23). The world of appearance consists now in the genuine facts, and reality consists now in facts that do not merely obtain but that enjoy a special status, that of being constitutive of fundamental reality. So we now have the following pair of principles:

it appears that φ if and only if φ
not: if φ , then *in reality* φ .

The fundamentality-based approach adopts a notion of appearances on which they coincide with mere facts whilst also adopting a more substantive notion of reality.²² The substantive notion of reality is, for example, naturally underwritten by the layered conception of reality, making it clear how merely obtaining does not suffice for obtaining in fundamental reality.

We have seen various problems facing the fundamentality-based framework. A plausible diagnosis of the source of the problems lies with the framework's understanding of the appearances as consisting in genuine facts. The world of appearances, the given, is a deeply messy world and does not exhibit the logical order that it would have to if the world of appearances consisted indeed in genuine facts. We have discussed conflicts between possible views of reality and the apparent facts (such as when a nihilist wants to think of the world as being somehow empty of tables), we have seen conflicts in the apparent facts that stem from the deep tensions that arise in the facts that are meant to lie across the various layers (such as facts concerning the solidity and non-solidity of ordinary objects), and we have seen conflicts that consist in outright inconsistencies in our common sense views (witnessed by philosophical puzzles). We want our metaphysical worldview to straighten things out. But if mere appearances consist in genuine facts, relegating facts to the realm of mere appearance (i.e. deeming them to be non-fundamental) leaves the threats of incoherence in place. We also want to straighten things out in a more explanatory sense, but the fundamentality-based approach does not allow us to undermine the awkward questions and explanatory challenges that antirealists are out to avoid by having an antirealist view of the given matter. The contents of our realist view are furthermore unduly constrained by the ordinary facts, if we are to maintain a plausible (i.e. factive) concept of fundamental reality. The fundamentality-based conception of the reality-appearance distinction seems to have things topsy-turvy: assuming logical order where this is lacking (namely, the world of appearance), and exempting from completeness and generality that which the *whole* world is meant to ultimately consist in (namely, reality). The discussed issues all cry out for a non-factive

this conflicts with the theoretical work that the reality-appearance distinction is meant to do for us, namely to exclude certain apparent facts from reality.

²² The second principle is necessary to keep appearances apart from reality. Assume for the sake of argument that if φ , then *in reality* φ . Combined with the left-to-right direction of the appearance schema – that if *it appears that* φ then φ – we would have the consequence that if *it appears that* φ then *in reality* φ , which would undermine the point of the reality-appearance distinction. So, if we accept that apparent facts are genuine facts – motivated by Moorean modesty – we are forced to accept that it is not the case that, if φ , then *in reality* φ .

understanding of the mere appearances, indeed, conflicting appearances inescapably involve metaphysics in carving fact from non-fact.

To repeat, though, the discussed issues do not undermine the use of the notions of grounding, naturalness or fundamentality as such. We are free to employ the notion of grounding, priority, or naturalness within the simple error-theoretic view of realism and antirealism, and ground some of the facts in other facts. Even though metaphysics should not be understood as revolving around fundamental reality, this is perfectly compatible with metaphysical theories of metaphysical structure. However, adopting the simple error-theoretic approach to the reality-appearance distinction does affect our understanding of metaphysical structure. There is little room to still think of the higher-level facts as somehow ‘less real’ than the lower-level facts. It becomes hard to see how metaphysical structure could even so much as inform our realist and antirealist views.²³

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